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**DEFINING EMOTION IN PSYCHOLOGY:
WHAT A HISTORICAL EXAMINATION OF THE USE OF
INTROSPECTION BY EARLY PSYCHOLOGISTS
REVEALS ABOUT A CURRENT PROBLEM**

Anna Kennedy

Thesis submitted for the degree of PhD in Psychology

The University of Edinburgh
2015

DECLARATION

I, Anna Kennedy, hereby declare that I am the author of this thesis and that the work presented herein is my own. This work has not been submitted for any other degree or professional qualification.

Signature.....

Date.....

ABSTRACT

Research conducted on emotion by psychologists has produced numerous understandings of the concept and there is currently no consensus as to how it should be defined (Russell, 2012). Despite some general agreement among some theorists as to certain aspects, such as physiological response, eliciting events, and related facial expressions, it is a persistent issue and discussions as to how a solution may be found have recurred at various points throughout the history of psychology. Some work has been done to address the problem through the meta-analysis of various definitions and this has proved to be useful in showing the areas where psychologists might agree (e.g. Izard, 2010; Kleinginna & Kleinginna, 1981; Plutchik, 1980). There is an assumption, therefore, that with enough research and debate a solution will be found. However, this assumption neglects to take into account the changing ontological and methodological contexts through which emotion has been defined in psychological science. For this reason the current debates lack a broader contextualisation which could reveal what has influenced the production of particular definitions and the reasons why the problems of definition have come about. This thesis aims to address this gap in the literature by presenting a historical analysis of the understandings of emotion which were produced during the late nineteenth and early twentieth centuries. Although there has been a great deal of historical work produced which examines psychological theories from this time, there is little, apart from Dixon (2012) which is specifically aimed at contextualising this particular issue. In particular, this thesis will examine one respect in which emotion is often defined; as that of being a *subjective experience*. This understanding, whilst it most often seems to be the way in which people, if asked, define emotion (Davitz, 1970) has, historically, proved to be contentious in psychological science, perhaps because it is difficult to capture. The thesis describes the method of introspection and its use as a means to examine the subjective experience of emotion during the early years of psychology, and looks at what can be learned about the issue of definition through an understanding of the work conducted during that period. It is shown that introspective analyses often presented a picture of emotions as complex, idiosyncratic and individual experiences and that these characteristics contrasted with the assumptions of the emerging scientific psychology that emotion should be defined as structured, predictable and universal. The search for a concept of emotion which embodied the latter rather than the former characteristics is described, and it is demonstrated that the result was a variety of different conceptualisations. The thesis concludes that it is important not to view the current problem simply as one of academic differences over the veracity of definitions, but to contextualise it in relation to the psychologist's search for a definition of emotion that assumes the characteristics of a scientific concept.

ACKNOWLEDGEMENTS

I would first like to thank my supervisors, Dr Peter Lamont, Dr Sue Widdicome and Dr Alistair Isaac, for supporting me through various stages of the process of the development of the thesis. Thank you for spending time reviewing and commenting on my work and for helping me to stay focused. Thank you too to my friend, Jane Marriot, for her fabulous proof-reading.

I am grateful for the financial support I have received from the University of Edinburgh, both for the Drever Trust Scholarship which enabled me to undertake my Masters and for the PPLS Career Development Scholarship that I was awarded and which meant that I could work on my thesis fulltime and also gave me the opportunity to develop my teaching skills. Thanks also to Funds for Women Graduates for their small grant which helped supplement my income in my final year.

Thank you to my children – Alex, Matthew and Eva Kennedy – who, now that I have stopped studying, will have my attention as never before, and to Darron, who has patiently listened and advised over the last four years. Thanks also goes to my friends and family who have taken an interest in my work and encouraged me along the way.

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CHAPTER 1

INTRODUCTION

1.1 The problem of defining emotion

Attempts to define the emotions and elucidate their character have ornamented the intellectual landscape for over two thousand years. Two characteristics of the continuing colloquy are particularly noteworthy: first, the presumption of palpability and, second, the interminability of debate. (Gergen, 1996, p. 60)

No question arises concerning the intensely personal and private aspect of the emotions: there always has been something sacred in the feelings and affections of the human individual which stood aghast at any attempt to make a scientific probe...If the anecdotal period was something to be combated and circumvented in the work of animal psychology because we regarded so many animals as pets, how much harder was it to be objective about an experience that was so intensely subjective in ourselves. (Ruckmick, 1936, p. 24)

For a topic of rather central importance in the emergence of modern psychology, introspection has not been accorded the historical attention it deserves. From the global statements and glib generalizations that abound one might easily get the impression that introspection always meant the same thing, irrespective of time and place. That, of course, is far from true, and if we are to avoid historically unjustified generalizations about “paradigms” and so forth, we will have to develop a far more differentiated view of the topic than presently prevails. (Danziger, 1980, p. 241)

The number and diversity of definitions of emotion and the failure of psychologists to come to a consensus on exactly what emotion is are persistent problems in psychology and, although several attempts have been made by psychologists to get to grips with these issues they are viewed as continuing to hamper the progress of affective science (Russell, 2012). The purpose of this first chapter is to describe these difficulties, the attempts to understand and solve them and also to outline the novel approach that will be taken in this thesis to examine them. The first section will outline the extent to which they have been reported as a concern by psychologists. It will further analyse the reasons for them and solutions to them which have been proposed by theorists,

before presenting an argument for the line which will be taken in the chapters that follow. The second and third sections give some historical background and the final section will outline the contents of Chapter Two to Chapter Seven.

1.1.1 Lack of consensus on a definition of emotion

In psychological science, there is currently a plethora of definitions of emotion and no agreement as to how emotion should be defined. This issue was highlighted most recently in a special section of *Emotion Review*. In that edition¹, Russell (2012), describes the unsettled state of current research on emotion: that there is still no consensual definition of the concept and that it is still not clear which psychological events psychologists should include as being emotions. Although, as Izard (2010) has shown, there may be some convergence as to different elements of emotion such as physiological response, eliciting events and cognitive appraisal, he has also stated that “Research on emotion flourishes in many disciplines and specialities, yet experts cannot agree on its definition. Theorists and researchers use the term emotion in ways that imply different processes and meanings” (Izard, 2007, p. 2). These problems, however, are not novel; they have pervaded the one hundred and fifty year evolution of psychology as a scientific discipline and have been highlighted by theorists over and over again at particular points of its development. Not long after the advent of the discipline, psychologists were highlighting these issues as a focus for discussion. In 1928, Madison Bentley, Professor of Psychology at Cornell University, speaking at the first international symposium for feelings and emotions research, stated that he was far from certain that psychologists were all talking about the same thing when they used the term *emotion*. He went on to describe the great variation in definitions that had emerged within the early years of the discipline,

Whatever concerns emotions by way of experience and by way of bodily processes is proper material for description. Its varieties, its history, its

¹ The edition includes a range of papers from psychology, philosophy and history to present a number of views of the issue.

pathology and its subsequent effect upon the organism are all thrilling matters for investigation. But to another psychologist, emotion means glandular products and visceral incidents, to a third the action of the autonomic nervous system, to still another, a type of external bodily activity or deportment; or again a pleasant or unpleasant reaction upon events or a 'mental state'. (p. 21)

This statement is illustrative of how the defining of emotion in psychology has often been characterised as a conundrum in need of a solution. Although, during the period in the mid-twentieth century when behaviourism dominated psychology, there was not a great deal of interest in how the issue might be solved, it reappeared with the return of the mind in cognitive psychological accounts in the 1960s. In 1973, Fantino described the effect of the lack of a consensual definition on the field of affective psychology. He stated, "Unfortunately, emotional behaviour has not been scientifically studied with the same breadth and depth as many other fields of psychology. One reason for this dearth of knowledge and of agreement about emotion is the problem of defining what emotion is" (p. 281). In the early eighties, the problem was most usefully highlighted in a paper summarising the psychological understandings of emotion that had been produced by psychologists, throughout psychology's history, up to that year. Kleinginna and Kleinginna (1981) listed ninety-two theories and definitions. The paper presented the enormity of the issue very starkly, indicating the diversity and breadth of definitions that psychological theorists had produced throughout psychology's history. Richards (2010) has claimed, however, that Kleinginna and Kleinginna's paper included a mere fraction of the number. He argues that philosopher-psychologists of the nineteenth century had also been greatly concerned with defining the concept and had found a variety of ways to do so. Certainly, *since* 1981, the number and range of definitions of emotions have continued to proliferate, particularly in relation to the development of neuroscientific understandings, and it would appear that psychologists are no nearer consensus than they were at that time.

Therefore, the more recent focus on the issue has come about because there is a concern that, although research into emotion continues apace, researchers are not researching the same subject because they are conceptualising the term in different ways. Further, it is felt that the lack of an agreed definition is preventing a focused

debate and continues to stand in the way of progress in the field (Mulligan & Scherer, 2012). Critics of affective psychology have argued that if theorists are not describing emotion in a consistent way they cannot produce a coherent body of knowledge which progresses the understanding of the phenomenon. For example, different psychologists have regarded different psychological events as *basic emotions* – that is emotions that are viewed as being the most universal, primitive or important. They have often included different psychological events in this category, simply because they differ in terms of how they define *emotion*. Tomkins (1984) defining emotion as related to density of neural firing, described nine basic emotions: anger, interest, contempt, disgust, distress, fear, joy, shame and surprise; Panskepp (1982), who understands emotion to be a hardwired biological response, four: expectancy, fear, rage and panic; and Ekman, Friesen and Ellsworth (1982), viewing these as having universal facial expressions described six. Indeed, this inability of psychologists to decide on what the primary emotions are has led to calls for the abandonment of the idea of discrete basic emotions entirely (Ortony & Turner, 1990).

This is illustrative of just how significant the issues of diversity of definition and lack of consensus in affective science are and how, as emotions research continues, whilst not always foremost in the minds of researchers, these issues underlie the work that they produce. They even, in the minds of some theorists, both past and current, cause a question to hang over the usefulness of the concept of emotion in psychology (e.g. Dixon, 2012; Russell, 2012; Scarantino, 2012). Duffy (1941, p. 292) stated “I can see no reason for a psychological study of ‘emotion’ as such. Emotion has no distinguishing characteristics. It merely represents an extreme manifestation of characteristics found in some degree in all responses”. Fantino (1973) concluded that it seemed futile retaining the concept in psychology given the seeming impossibility of definition.² Despite this scepticism that has arisen at times from some quarters, there does not appear to be a great deal of support in current affective science for the

² Kleinginna & Kleinginna (1981), cite, what they call, nine ‘skeptical statements’ as to the usefulness of retaining the concept in psychology. These statements include those who argue that emotion, as a term, does not point to a coherent psychological phenomenon.

rejection of the concept entirely. It is vital, therefore, that psychologists find a way of understanding why these problems persist.

1.1.2 Attempts to understand and address the problem

As well as describing the impediment to the understanding of emotion that the difficulties surrounding its definition have produced, some psychologists have also been moved to formulate suggestions as to why these problems exist and how they might most usefully be tackled. This section will present a review of a range of these proposals and, in doing so, will contextualise the particular approach that this thesis will take within the existing literature. Three approaches to understanding the problem will be described: first, the idea that emotion is a naturally complex psychological phenomenon and that definitions must necessarily be multifaceted and complex; second, the view that the development of different forms of psychological knowledge and traditions of research have been instrumental in the production of different emotion definitions; and third, the notion that the production of a scientific understanding of emotion is a problem because it is contingent on the everyday meanings that the term *emotion* holds.

The most persistent view in psychology is that there are many understandings of emotion because emotion is a complex phenomenon. Kleinginna & Kleinginna's (1981) paper, mentioned above, presented the most comprehensive review of emotions definitions and is the best example of a paper that has attempted to analyse the problem, although now somewhat out of date. The complexity of the phenomenon was demonstrated by their placing of the definitions into *eleven* different categories on the basis of the particular theoretical issues theorists emphasised. Drawing on definitions from dictionaries, as well as physiological, introductory and well-known texts in psychology, the paper highlighted not only the great number of definitions but also the range and diversity of components that were discussed by psychologists as being aspects of emotion. The categories highlighted by the authors include the experiential categories of affect and cognition; physical categories of external

emotional stimuli, physiological mechanisms and expressive behaviour; those that emphasise adaptation; those that discuss motivation and those that are multifaceted. As the authors describe, most of the ninety-two definitions could be placed in more than one category indicating that theorists, in general, consider emotion to be a multi-aspect phenomenon. The final category contains some attempts at providing definitions that draw together a range of aspects in one definition; most commonly affective, cognitive, physiological and behavioural aspects. However, even within this grouping there are differences, both as to what aspects to include, which are most salient, and also how these components fit together. Finally, from the definitions that they present, the authors provide a definition of emotion that encompasses a range of these understandings and which can describe what they view as the complexity of emotion,

Emotion is a complex set of interactions among subjective and objective factors, mediated by neural/hormonal systems, which can (a) give rise to affective experiences such as feelings of arousal, pleasure/displeasure; (b) generate cognitive processes such as emotionally relevant perceptual effects, appraisals, labelling processes; (c) activate widespread physiological adjustments to the arising conditions; and (d) lead to behaviour that is often, but not always expressive, goal-directed and adaptive. (p. 355)

The conceptualisation of emotion as a complex hybrid of several different aspects is one that is particularly ingrained in affective psychology. Throughout the twentieth century, there has been an ever-growing list of elements that a good definition of emotion is expected to encompass. Lazarus (1991a; 1991b), for example, has maintained that a good theory of emotion should address twelve different issues, including the role of action tendencies and physiology; distinctions between an emotion and a non-emotion; the role of appraisal and consciousness; and the relationship between the biological and sociocultural bases of emotion. Izard (2010), similarly, views emotion as a diverse and complex phenomenon. He examined the problem of lack of consensus by consulting current leading theorists in emotion research as to the various elements they viewed as being included in the concept. From the responses that he got, although there seemed to be broad agreement on the

“structures³ and functions”⁴ of emotion, there were distinct differences as to which were perceived as most salient. What is clear from this exercise, however, is that definitions of emotion commonly combine an assortment of characteristics which are subject to change over time and between theorists.

Even though several multi-aspect definitions have been produced, none as yet have proved to be completely satisfactory. Recently, for example, in another special section of *Emotion Review*, four different approaches to emotion are discussed: basic emotion theory, appraisal theory, psychological construction theory and social construction theory. The points of agreement between these were looked at, in order to attempt to produce a definition which integrated all the necessary aspects. The following quote from Russell (2014, p.1), indicates both the continued adherence of psychologists to multifaceted understandings of emotion, and also the difficulties of producing one with which to satisfy all theorists,

Areas of agreement emerged. The nature–nurture debate is behind us: it’s both. All believe in evolution; all believe in culture. In addition, all believe in appraisal processes. But then, appraisal theories come in two (or maybe three) importantly different flavors. All rejected essentialism (Or have they? wondered Zachar, 2014). Some apparent differences among the perspectives...seem superficial. Some differences pertain merely to what part of the whole is thought more interesting. Some differences pertain to different conclusions drawn from existing empirical evidence. Other differences, however, run deeper—including defining what an emotion is and determining whether these four theories are theories of the same thing. Some differences remain elusive.

It seems, largely, as if the more research is conducted on emotion the more difficult it is to pin down scientifically. This leads on to the second point to be covered in this section: the idea that the variety of definitions and deficiency of consensus has been due to the breadth of the discipline of psychology itself. It is argued that it is not

³ Structures include: dedicated neural systems, response systems, feeling state, expressive behaviour, antecedent cognitive appraisal and cognitive interpretation of feeling state (Izard, 2010, p.365).

⁴ Functions include: recruits response systems, motivates cognition and action, organises responses, monitors significance of events, provides information or meaning, relational, social, controls responses, motivates behaviour (Izard, 2010, p. 365).

simply that emotion is a complex phenomenon, but the problems persist because psychology is a complex and diverse discipline and has taken various approaches to the study of emotion at different times in its history (Gergen, 1996). Most theorists, however, would see these as two sides of the same coin: that it is *because* emotion is complex it has necessarily been studied through many different approaches. This is highlighted, above, by the attempts to find common ground between the four different approaches covered by Russell (2014). It is also shown very starkly in the work of K.T. Strongman. Over the last thirty years Strongman has published five editions of *The Psychology of Emotion*. The book describes the theories of emotion that psychologists have produced historically and also includes current theories. Each edition has had to be adapted with regard to the theories included with the changing shape of the epistemological and methodological landscape. In the latest edition, Strongman (2003) describes 150 theories of emotion. He separates them into different types, including phenomenological, cognitive, behavioural and physiological, but acknowledges that he has not covered everything. “Emotion”, Strongman (1987) says “has sometimes been defined, for example, as a state of the organism which affects behaviour and sometimes more directly as a response. When defined as a state, it is sometimes regarded as mentalistic, and sometimes as physiological. When defined as a response, it is sometimes seen as physiological and sometimes as behavioural” (p. 7). As amply illustrated above emotion has been studied from many different angles. As psychology developed into a diverse discipline, the understanding of emotion, arguably more than any other field of psychology, was, and continues to be, affected by the variety of approaches. It could be argued that this diversity results in the production of rounder and more complex understandings and in capturing more characteristics of the phenomenon. Alternatively, the result of this diversity could be viewed as having produced the situation, first described by Bentley (1928), that it is not clear if theorists are really discussing the same psychological entity when they use the term *emotion*.

Some theorists have put the lack of consensus down to the lack of connection between the different strands of research through which emotion has been explored (Mulligan & Scherer, 2012). As described, there have been attempts to tie these different threads of research together, to find points of commonality and shared interests. Despite this,

the ontological differences between these approaches continue to present a barrier to finding a common definition. It has been argued that theorists are often unwilling to let go of the legacies of the particular tradition that their research follows in order to produce agreement. Hebb argued back in 1949 that, in emotions research in particular, tradition carried a great deal of weight. More recently, Mulligan and Scherer (2012, p. 346) stated that “There is little hope that there ever will be agreement on a common definition of emotion, given the sacred traditions of the disciplines involved and the egos of the scholars working in these disciplines.” Traditional lines of demarcation in, for example, the evolutionary or psycho-physiological traditions, have divided its study into separate branches of research each having very different types of scientific language, methods and theories. Gendron and Barrett (2009) and Russell (2014) describe three particular types of psychologist working in affective psychology – basic theorists, appraisal theorists and psychological constructionists, and highlight the historical lines of development of these approaches and the fundamental differences that exist between them. The disagreement between psychological constructionist theorists and basic theorists as to the existence of discrete emotions is just one of many ontological differences that characterise the field. Further, even within these broad categories there have been numerous ways of understanding emotion throughout psychology's history. For example, Scarantino and Griffiths (2011) describe three ways to describe emotion as 'basic' – psychologically, biologically or conceptually. Entrenchment of theorists within their traditions can cause emotion definitions to be understood only within particular research contexts and to perpetuate communication difficulties between psychologists. So although there may be points of mutual agreement, there are also significant epistemological and methodological barriers to consensus.

Although, as has been described, some theorists have attempted to bring together different traditions in grand theories of emotion, it seems that theorists are often unwilling to let go of the understandings of emotion which exist within their own particular paradigms. Indeed, these comprehensive theories of emotion have not been particularly successful, because of the reductive nature of psychological research. Kleinginna and Kleinginna's comprehensive definition, for example, was criticised by Strongman (1987) as not useful to research – he views it as overly complex and too

inclusive. Rather, he says, definitions need to include some but not all aspects of emotion in order that they can be useful to emotions research. Young (1973) also illustrated this characteristic of psychological research when he stated that “The trouble with the psychologist is that emotional processes and states are complex and can be analysed from so many different points of view that a complete picture is virtually impossible. It is necessary, therefore, to examine emotional events piecemeal and in different systematic contexts” (p. 749). Although emotion may be understood as having many different aspects, different research approaches can only cope with fairly narrow definitions of emotion.

While emotion continues to be conceptualised differently in different research contexts, a related issue, and the third point to be raised in this section, has been highlighted as causing the problem: that of the use of an everyday concept as a scientific concept. Scarantino, for example, has argued, that psychologists should view scientific uses of the term *emotion* as separate from everyday applications of the term if they are to develop a concept devoid of the baggage of its meaning in the world outside the lab (Scarantino, 2012; Scarantino & Griffiths, 2011). Scarantino and Griffiths, as well as Barrett (2006), argue that there has been in psychology a natural kind assumption. This is the premise that everyday emotion categories are internally homogeneous and can be delineated scientifically. Griffiths (1997) suggests, it may be rather that some emotions, such as *anger*, are adequately described by particular biological or psychological theories whereas other instances of emotion, such as *guilt*, will require other kinds of explanation, as related to culture and environment for example. It is not possible, therefore, for science to take everyday understandings of emotion or particular emotions and to define them in a way that will adequately provide a basis for scientific study. Rather, Scarantino (2012) suggests that the study of emotion should be conducted in two separate projects: the *Folk Emotion Project*, which can describe how people use traditional emotion categories and the *Scientific Emotion Project*, which aims to discover natural kind definitions of emotion which will be useful for scientific research. Rather than using everyday emotion terms, the latter could rename instances of emotional events using neologisms, such as ‘WS34’ for anger (Scarantino, 2012, p. 366). The problem with this approach, however, is that it sets up a dichotomy between an emotion as an everyday occurrence and one as

scientific occurrence. The question is whether the scientific definition will have enough in common with the everyday occurrence in order to provide some useful understanding of emotion, given the extent to which emotions are subject to people's cultural and linguistic interpretations (Mesquita & Leu, 2007; Wierzbicka, 1995). It also highlights something quite fundamental about the study of emotion in psychology: that psychologists are often more concerned about producing understandings which reflect particular scientific values, than they are about understanding what emotion means in the lives of people.

Thus, this overview of the issue of the proliferation of definitions of emotion and the resulting lack of consensus in psychology has described several concerns. It has outlined the persistence of these problems and the difficulty psychologists have had in finding a solution. It has identified, also, some reasons that have been proposed for these concerns: first, that emotion is a complex phenomenon; second, that there has been an increasing range of different approaches to researching emotion in psychology and third, that scientific understandings of emotion may be tainted by everyday conceptualisations of the term. In attempting to understand these issues this thesis will look at how these reasons may be connected, although not in the ways that have been so far suggested. Although, as described, some theorists would argue that there are many different approaches to researching emotion because emotion is a complex phenomenon, this thesis will examine the view that it is, rather, that emotion is characterised in psychology as being a multifaceted phenomenon *because* psychological science is a broad and fragmented discipline. It will explore the idea that psychologists cannot simply assume that emotion is a complex phenomenon, but that the meaning that the term *emotion* holds in psychology is linked directly to the ways in which psychologists have attempted to observe and understand it and that, as the number of approaches to studying emotion have increased, so too has the complexity of its conceptualisation. This idea will be considered throughout the chapters of this thesis, where the early development of the science of psychology is described and with it the development of the concept of emotion. The third point made above, however, highlights a particular issue for psychologists and one that will also be the focus of what follows: that, in defining emotion scientifically, psychologists are attempting to capture an everyday, individual, subjective and, essentially, private

experience. The following section will examine the extent to which this is an issue for affective science and will argue that exploring this matter may help us get to the root of the problems of the proliferation of definitions of emotion.

1.1.3 The subjective experience of emotion

This section describes the idea of emotion as a subjective experience and how it has fared in psychological understandings of emotion. It will illustrate the tendency for this characterisation to be neglected in psychological research because experience cannot be directly observed in participants, and it is also currently viewed as scientifically unacceptable for psychologists to be seen to be using their own experiences to understand emotion. It will suggest, however, that as people who experience emotion, psychologists themselves implicitly bring their subjective experiences to their research when they study emotion, and will argue for the need to examine the role this plays in the production of different understandings of emotion.

Some evidence points to the fact that while psychologists struggle to define emotion scientifically, people, in contrast, seem very much at ease with the concept. As Young (1973) has stated “almost everyone except the psychologist knows what an emotion is” (p. 749). This assertion was illustrated by research done by Davitz (1970), having noticed that “a psychologist talking to another psychologist about his emotions is not a situation likely to elicit clarity of communication” (p. 251). Davitz examined how ordinary people communicated with each other about emotion. He found that they referred to “*experiences* – not to behaviours, not to situations, and certainly not to measures obtained from an electroencephalogram or a galvanometer” (p. 251). He also noted that although they had no knowledge of behavioural theories or of the physiological conditions that accompanied emotion, they were able to discuss emotion more coherently than the psychologists with whom he worked.

Although people tend to describe emotion simply as an experience, psychological researchers are apt to be concerned predominantly with other views of emotion. Plutchik (1980) found that most definitions do not refer to the subjective aspect of emotions. Further, Izard (2010) has shown that even though some theorists agree that

the subjective or phenomenological perspective is important to the understanding of emotion, their acceptance of it is very much dependent on the particular area of the discipline they come from. Sixty-seven of Kleinginna and Kleinginna's (1981) definitions mention this aspect, and they state that psychologists included the affective aspect⁵ more frequently than any other characteristic. However, it is not considered by many psychologists to be the *only* feature of emotion, or even the most important, and indeed many psychologists do not include it at all. Although, some theorists have developed explicitly *phenomenological* theories of emotion, focused particularly on experience - Strongman (2003) discusses the work of Stumpf, Sartre, Hillman, Fell and Denzin, for example - these appear to have had little impact on the ideas of emotion espoused by current experimental work.

The scientific psychology of emotion has therefore often been characterised by the uncomfortable position psychologists have with regard to emotional experience. Magda Arnold (1960) recognised the problem of the neglect of the subjective experience of emotion by most psychologists and, in contrast, advocated that it be centre stage in any understanding of emotion. She described a situation in which the more that psychologists described emotion scientifically, the more it appeared to move away from the everyday human phenomenon that it sought to understand and this movement, she argued, had profound effects on the relevance of the knowledge that psychologists were producing. She stated that "When the connection between any system and common experience snaps, that system (and not common sense) is doomed. At best, it will maintain itself in a forgotten eddy in the stream of scientific endeavour without contributing to scientific advance" (p. 6). So, although psychologists were producing a range of diverse scientific understandings of emotion, it appeared that there was something unsatisfactory in the way they reflected emotion as it was understood through experience. This issue is one that some affective theorists have begun to explore again more recently. Barrett (2006)⁶ presented a meta-analysis of recent work that has been conducted to understand emotion through the emotional

⁵ Kleinginna & Kleinginna use the term 'affective aspect' to denote the subjective feeling or experience of emotion.

⁶ Barrett's study focuses on the results of verbal reports on the experience of emotion to show how these have failed to reveal differences in experience between different emotions e.g. fear and anger.

experiences of participants. Despite this work, Barrett, Mesquita, Ochsner and Gross (2007) acknowledge that there is often an assumption in current affective science that emotion can and should be explained simply in neurobiological terms. Both Barrett *et al.* and Costall (2013) argue that, since behaviourism attempted to brand subjective knowledge as being unscientific, there continues to be a dualism between the subjective and the objective which persists in defining the work that psychologists do. They claim that there is a persistent attitude that if psychologists are to produce a truly scientific understanding of emotion, the idea of subjective experience should be done away with entirely. This echoes Panskepp's (1982) discussion of the issue in which he stated that "It is difficult to agree how, within the constraints of scientific objectivity, we can derive substantive understanding of phenomena that appear intimately linked to the internal experiences of organisms" (p. 407). Indeed, the tendency in psychology generally seems to be the presentation of a distinction between emotions as human experiences, which are not to be trusted, and scientific representations of emotion which are trustworthy. So, while phenomenologists would regard the former as the definition of an emotion, many theorists of emotion tend to reject the veracity of human experience and consign it to folk psychology (e.g. Scarantino, 2012).

Although it is certainly true that the experience of emotion has been often neglected as an object of study in psychology, even more overlooked is an understanding of the effect of psychologists' own subjective emotional experiences on the study of emotion that they conduct. As Valentine (1982) has argued,

A particular difficulty is due to reflexivity. Not only is it the case that the observer and the observed are often members of the same species, but also that actually doing psychology constitutes part of its subject matter. This means that at the very least psychological theories must be self-referring in the sense of explaining the psychologist's own behavior. (p. 4)

If, as Valentine states, theories must explain psychologists' own behaviour, is there then something about the inadequacy of psychological theories of emotion that they are not widely accepted in psychology because they fail, not simply to adequately describe emotion scientifically, but to describe emotion in a way that make sense even to psychologists themselves, as experiencing, emotional human beings?

Costall (2013) argues that when we understand the production of psychological knowledge as being a human practice, it is clear that subjective experiences of emotion and the objective descriptions of emotion psychologists produce are inextricably linked. Kagan (2007, p. 1) states, that the emergence in psychology of a reliance on methods to describe *invisible* objects “objectified a subjective state”. This statement characterises the position of emotion in psychology where psychologists cannot view and measure participants’ experiences, but can view and measure what are seen as the accompaniments to the experience such as facial expression and physiological responses. As Danziger (1990) and Lamont (2013) describe, this means that these indirect measures must be assumed to represent the phenomenon that is being studied. An occurrence of an emotional experience in a participant can only be inferred by observing their expression, looking at their heart rate on a monitor or viewing the lit up areas on a brain scan or by a verbal report. It has been argued, therefore, that psychologists own experiences of emotion must come into play in the experimental process (Strongman, 1987). These measures described above must necessarily be subject to the interpretation of the psychologist who must have some *a priori* experience of the phenomenon in order to understand their significance. Therefore, although Barrett *et al.* and others, have attempted recently to reinvigorate the inclusion of experience in the experimental study of emotion, it could be claimed, rather, that it has never really gone away.

Fell (1977) has argued that a psychologist’s experience of emotion not only feeds into the research but is necessary for the research to begin. In terms of how the elicitation of emotions in the lab is conducted, for example, psychologists must have some knowledge of emotion in order to understand what is being elicited and the necessary stimuli to do so. As Strongman (1987) states, an emotion can only be accepted as occurring in an experiment if a person is having an emotional experience “How can we know a stimulus is ‘emotional’ without finding that it leads to...the emotional experience? It is difficult to define the stimulus independently of the response” (p. 8). While facial expression, raised heart rate and increased motivation to act may be aspects which indicate that an emotion is happening, if an emotional experience does not accompany these then an emotion cannot have been said to occur. Psychologists, however, can only know that they have managed to induce fear or anger or happiness

in a participant if they know what that experience is like. Nagel (1986, p. 20) argues in *The View from Nowhere*, “When we conceive of the minds of others, we cannot abandon the essential factor of a point of view: instead we must generalise and think of ourselves as one point of view among others”. This would suggest that there is, perhaps, something personal about each theory and each definition and that the scientific, objective and the everyday, subjective conceptualisations are inextricably intertwined. It would seem that these subjective starting points, are often guiding the definition and causing individual theorists to view emotion differently or take a particular approach to it. However, these are rarely explicitly acknowledged or examined as emotion becomes defined scientifically. There is a dichotomy, therefore, between the presentation of an explicit objective and scientific understanding of emotion and the implicit subjective emotional experiences of psychologists. It is this relationship and what it might mean for the proliferation of a variety of ways to observe and understand emotion and the resulting number of emotions definitions and lack of consensus that will be examined in this thesis.

This section has described the issue of the subjective experience of emotion and shown that this is a neglected area of research, both in terms of how it has been studied in psychology and in terms of how the subjective experiences of psychologists have impacted on the way in which emotion is defined in psychology. The following section will describe how the latter aspect in particular will be examined in the thesis and will develop its aims and the questions it will answer.

1.1.4 Aims of the thesis and research questions

As described above, the literature on the problem of definition has tended to address it by analysing the definitions that have been produced in psychology and finding commonalities between them. These explorations often make the assumption that it will be solved from within psychological science itself and that if the study of emotion is conducted ‘correctly’ or if enough research is done, a truthful understanding of the phenomenon will emerge. In examining his findings, Izard (2010), for example,

concluded that emotion research will progress if each theorist *contextualises* the definition they use. What Izard means by *contextualise* is “giving descriptions of factors that are present in the context (e.g. of an experiment) that might influence the emotion process under consideration” (p. 369). This narrow view of what it is to contextualise a psychological concept such as emotion, although an important step towards clarity in emotions research, does not take into account the way in which the concept has been shaped over time and the cultural and historical meanings that it carries. Indeed, in relation to this, Izard’s paper is criticised by Gendron (2010) as not adequately addressing the history of the concept of emotion, where it has come from and how it has been formed over time with the involvement of many different theorists. In short, she argues that the definition of emotion cannot be elucidated in a scientific paper, in which the term is removed both from its cultural setting and from its historical past. It is important, therefore, to understand from a historical perspective *why* the different definitions have developed in different contexts during the course of psychological exploration. There is a great deal of historical work that theorists could draw on to better understand the current position. However, the need for the application of historical knowledge to the issue can most usefully be shown by demonstrating a direct link from past decisions made in psychology to the present problem. This is illustrated by Dixon (2012), whose work will be described in more detail in the following section. Dixon sheds some light on one reason why the defining of emotion is today problematic. He argues that it has arisen because of the introduction of the term *emotions* to replace a range of more commonly used terms for affect in the early nineteenth century and that it encompasses too vast a range of psychological experience to be used coherently in current psychological work. In doing so, Dixon demonstrates, that it is by exploring the past usages of the concept that we can truly make sense of why this has been a persistent issue in psychology.

Although this thesis will cover some similar ground to Dixon’s work, it will take the exploration in a different direction and cover a different time period because its purpose is to look at what has influenced the development of the multi-aspect concept that we have today, and why it has come to differ from the everyday understanding of emotion as a subjective experience as described by Davitz (1970). The thesis will be focused particularly on the assumptions that psychologists have had about what a

scientific definition should look like and where their own subjective experiences of emotion have fitted in to these assumptions. It will have a particular focus on psychologists' own accounts of the experience of emotion, as described through introspection. Although there have been few explicit programs of introspective psychology for many years, there is still to some degree a dependence of psychologists on their experiences of emotion. Indeed, it has been argued that introspection, as used in an informal way, has never gone away (Brock, 2013; Costall, 2006). The relationship between psychologists' experiences of emotion and the variety of definitions that have been produced has not been explored, perhaps because there is an assumption that, because they are objective observers of emotion, psychologists' experiences do not actually feed into the work that they do. However, as described above, it is necessary to understand what this means for the conceptualisations of emotion that are produced.

The focus of this thesis, therefore, will be on a time in which the examination of the subjective experiences of psychologists were an explicit part of how emotion was observed and understood. From the mid-nineteenth century, as psychology was developing into an academic discipline in its own right, the use of introspection was the method by which psychologists studied the mind. For over eighty years this process of self-observation, as will be described, was viewed by many theorists as the most valuable means by which the elements of the mind - for example, the senses, the emotions, intellect and consciousness - could be viewed and analysed because it was the inner experiences, or mental states, that psychologists sought to understand. It was from the starting point of the understanding of emotion as a subjective human experience or feeling that the psychology of emotion developed. In taking a historical approach, the chapters will explore the reasons for the emergence of the various understandings of emotion, many of which we still recognise today, that developed alongside that of subjective experience, by looking at the ways in which these were formed and the reasons for their development. The thesis will also describe the assumptions of an emerging psychological science in order to look at what led psychologists to define emotion in ways other than as a mental state or experience.

Therefore, there will be four particular aims that distinguish this thesis from previous explorations of the topic. First, it will examine the impact of the early strivings of

psychologists to study the mind on the direction that understandings of emotion were to take in psychology. Second, it will not make assumptions as to the efficacy and usefulness of the range of understandings of emotion in emotions research but will, rather, seek to understand *why* a number of traditions, approaches and methods have been applied to emotion. Third, it will cover a period, 1850-1930, in which the subjective experiences of psychologists were very much an explicit part of the understandings of emotion that they produced. Analysing psychological work conducted during this period allows for an exploration of how psychologists described emotion when they observed themselves. Fourth, the effect of the production of a subjective, experiential understanding of emotion in interaction with the drive to conduct psychological work in a scientific and objective manner on the emergence of understandings of emotion can be examined. The research questions, therefore, will be: What was the effect of the drive to conduct psychological research scientifically on the way in which subjective experiences of emotion were viewed? How did this drive contribute to the proliferation of understandings of emotion?

Having outlined the direction that the thesis will take, the rest of this chapter will set the background for the work and go on to describe the contents of the chapters. It will provide a brief historical outline of how emotion was viewed in early nineteenth century British philosophy in order to explain where the concept had come from and how it had been understood prior to 1850. Section 1.4. will, similarly, show how introspection was an explicit part of particularly British philosophical thinking and its importance to the work of philosophers prior to the development of psychology as a distinct academic discipline.

1.2 Emotion in the early nineteenth century

This section will set the background for the thesis by describing briefly how emotion was understood prior to the mid-nineteenth century. It will highlight first, how, in the early nineteenth century, *emotion* emerged as a term to be used to denote affect in philosophy; second, it will discuss the kind of concept the term was assumed to

represent; third, it will describe how precise attempts to define emotion became a priority when emotions began to be studied scientifically.

Although the scientific study of emotion emerged in psychology in the nineteenth century, people's affective lives had been of interest in philosophy for millennia. Aristotle had stated, for example, "Now all the soul's modifications do seem to involve the body – anger, meekness, fear, compassion, and joy and love and hate. For along these the body also is to some degree affected" (Arnold, 1960). Descartes (1649/1989), also, had described the six primitive passions as wonder, love, hatred, desire, joy and sadness. The term *passion* was, also, used by Hobbes, Hume, and Locke. As both Danziger (1997a) and Dixon (2003; 2012) describe, in the English language at least, the words sentiments, passions and affections were, prior to the nineteenth century, the common ways to express the idea of feeling.

However, according to Dixon, a profound change happened in the early 1800s when the term *emotion* began to be used to represent this aspect of the human condition. In describing the radical change that took place during the early nineteenth century, Dixon states that,

It is an immensely striking fact of the history of English-speaking psychological thought that during the period between c.1800 and c. 1850 a wholesale change in established vocabulary occurred such that those engaged in theoretical discussions about phenomena including hope, fear, love, hate, joy, sorrow, anger and the like no longer primarily discussed the passions or affections of the soul, nor the sentiments, but almost invariably referred to 'the emotions'. This transition is as striking as if established conceptual terms such as 'reason' or 'memory' or 'imagination' or 'will' had been quite suddenly replaced by a wholly new category. (2003, p. 4)

The terms that had been used previously were much more nuanced in their meaning than the all-encompassing term *emotion*. Sentiments denoted higher or more refined feelings; passions, the strong or compelling feelings that drive people; and the affections, a term to describe a feeling of devotion or being drawn to someone of something. As Dixon goes on to argue because the meanings of these words had theological connotations, *emotion* was the term deliberately used by philosophers at the beginning of the nineteenth century to secularize feeling or affect for scientific study. In particular he discusses the work of Thomas Brown (1822). Brown discusses

emotions in the following way: “if any definition of them be possible, they may be defined to be vivid feelings, arising immediately from the considerations of objects perceived or remembered, or imagined, or from other prior emotions” (p. 252). While there were still discussions of the sentiments in psychology even into the early twentieth century (e.g. Shand, 1914), gradually *emotion*, became almost exclusive in both academic and everyday usages to refer to affective experiences. In describing this change, Dixon shows the particular influence of academia in how people come to understand themselves and their own psychology and argues that the term *emotion* at that time, in contrast to previous cultural understandings of affect, as disconnected from a theological or moral framework, came to denote “morally disengaged, bodily non-cognitive and involuntary feelings” (p. 3).

Dixon (2012) states, however, that Brown himself acknowledged that the term *emotion* was almost impossible to encapsulate in a definition. Prior to the development of scientific forms of knowledge about the mind and human behaviour there had been no real need to develop a precise definition of emotion or any other affective concept for that matter. It was not thought that abstract psychological phenomena could be easily pinned down. However, as the work of anatomists, physiologists and psychologists progressed throughout the nineteenth century, attempts were made by theorists whose scientific interest in the subject meant that they in some way had to describe what they intended by it in their writings. The work of Charles Bell (1774-1842), the Scottish anatomist, acknowledged by Darwin (1872) as being influential on his own thinking on emotional expression, is illustrative of this. His book, *The Anatomy and Philosophy of Expression as connected with the Fine Arts*, provided descriptions of expressions of emotion. These descriptions relating to particular emotions were however qualified by Bell's statement as to the scientifically imprecise definition of the term. He stated “Were we not to limit our inquiry to the agitations of the body, we should be embarrassed with the ambiguity with such words as passion, emotion, desire, inclination, appetite” (Bell, 1844, p. 145). Although he may have been 'embarrassed' at the inability of scientists to produce only vague definitions of their objects of inquiry, Bell had made such an attempt, defining emotions as “certain changes or affections of the mind, as grief, joy, or astonishment” (1824, p. 18). So although emotion had been and continued to be, described by philosophers, the real driving

force behind the production of definitions was the development of the production of scientific knowledge about people, their bodies and their minds.

What will be explored in the following chapters is the extent to which emotion from the mid nineteenth century to the early twentieth century was understood to be predominantly a subjective feeling or experience or mental state in scientific psychology. The English psychologist James Sully, for example, stated in 1892, “The word emotion is...beginning to receive general adoption as the name of the higher group of *feelings*” (1892a, p. 56, my italics). However, because a precise definition of emotion had never really been established from the outset, there was also a fluidity about its meaning as a term as scientific psychology developed.

The primary method viewed as suitable for the study of emotion in the early period of psychological research was the introspective analysis of the psychologist's experience as a means of describing and explaining what emotion was. The following section will present a brief description of introspection as it was used in the early part of the nineteenth century and will describe some of the disagreements as to its efficacy as a scientific method.

1.3 Introspection in the early nineteenth century

Introspection as used in every-day language, means literally an inward vision: a paying attention to, or observing of the process of the organism itself: the feelings, emotion, and organic processes of other kinds – organic sensations, if you want to cling to that term; and in scientific psychology we can most usefully employ the term in practically the same way; to signify awareness of things inside the body; of feelings, emotions, organic changes, and muscular activities. (Dunlap, 1926, p. 319)

Introspection was used in early psychological work and epitomised the work of most psychological theorists of the nineteenth century (e.g. Bain, 1855; James, 1890a, Ladd, 1894). In the simplest terms, it is the observation of one's mental state (Lyons, 1986). In philosophy and psychology it has, however, been understood in many more nuanced

ways. Indeed, Alexander Bain identified thirteen different kinds of introspection (Bain, 1899). Later, Knight Dunlap (1912), the US psychologist, when writing on the usages of the introspection in psychology at that time, described these as being 'technical' and as having developed more recently. He stated, however, that, "the signification is very old. We need not pursue it back farther than Reid, Hamilton, Bain and James Mill, to get a definite understanding of the extent to which 'self-consciousness' is involved in British theories" (p. 405). This section will describe introspection in the early part of the nineteenth century and the controversy surrounding its use as a scientific method.

Although we now take for granted that we can examine our minds, as Lyons (1986) discusses, this may not always have been the case. Lyons presents evidence to show that introspection was described both in the work of Augustine and Descartes. He argues that it was not until the seventeenth century that self-observation became part of the philosopher's repertoire as a product of the rise of empiricism in British philosophy (Brock, 2013; Lyons, 1986). Locke argued that knowledge is based on experience of which we have both an inner mental kind and an external physical kind. He stated that "the mind comes to reflect on its own *operations* about the *ideas* got by *sensation* and thereby stores itself with a new set of *ideas*, which I call *ideas of reflection*. Introspection could, therefore, be used as a means to study inner experience and through it to better understand human nature" (Locke as cited in Lyons, 1986, p. 3). Introspection, therefore, began to be viewed at this time as being a particularly useful tool in the description of the mental states.

The method was taken up by Scottish schools of philosophy, as well as the associationists in England. Although it was the process by which much British philosophical thought was conducted, it was rejected by German philosophers who regarded rational enquiry as the means to understand the human mind, rather than the examination of consciousness. This rejection was because they, unlike their British counterparts did not accept that consciousness was equated with mind. For this reason, these philosophers argued that the study of the former had little to say about the latter (Danziger, 1980). Kant argued that this form of introspection was not useful. However, he did accept that the reflection on the phenomenal self - that is on the bodily feelings and experiences - was an acceptable form of introspection in philosophy. In

Britain, while it was more accepted, there was a great deal of discussion about the efficacy of introspection and what it entailed. As Dunlap (1912) discusses, there were some fundamental disagreements between different philosophers as to the nature of introspection and its efficacy as a method. Thomas Reid, for example, disagreed with James Mill in terms of the involvement of consciousness in the act of self-reflection. The question was if consciousness was part of the self-reflection or what was being reflected on. Consciousness, Reid believed, was a part of every mental act. He stated, “Can I feel without knowing that I feel? This is impossible. Now this...common condition of self-knowledge, is precisely what is denominated consciousness” (1880, as cited in Dunlap, 1912, p. 405). James Mill, in contrast, argued that feeling and consciousness were practically interchangeable, and consciousness was the awareness of oneself in a phenomenological, rather than mental, sense.

In the early nineteenth century also the nature of introspection continued to be contested in philosophy. This time the disagreement was between James Mill’s son, J. S. Mill and William Hamilton. Danziger (1980) describes how Hamilton introduced explicitly Leibnizian notions of unconscious mental activity, and Mill the younger took up the mantle of defender of introspection’s status from his father. Mill, however, was to defend the method from a far more potent attack from Auguste Comte in the 1830s. The argument put forward by the French philosopher in his *Cours de Philosophie Positive*, was that it was not possible for a mind to observe a mind. He argued, further, that the results of such an endeavour had never been consistent. In defending, J.S. Mill mocked Comte’s premise for rejecting introspection,

But it is clear to him that we can learn very little about the feelings and nothing at all about the intellect, by self-observation. Our intelligence can observe all other things, but not itself: we cannot observe ourselves observing, or observe ourselves reasoning: and if we could, attention to this reflex operation would annihilate its object, by stopping the process observed. (Mill, 1891, p. 63)

In refutation of Comte’s argument, Mill referred him to both his experience and to the work of Hamilton, who had, he said, “described several impressions at once” (p. 64). Secondly, he discussed the idea of retrospection where an experience is held in memory to be analysed at a later time. In any case, he stated that introspection was the study of the workings of the mind by direct observation, rather than by their results,

and as such was a necessary part of psychological theorising. As Danziger (1980) states, Comte's criticisms were not widely accepted in psychology. As will be described in the following chapters, introspection continued to be drawn on by most early psychologists as the means of obtaining direct access to the mind. It seemed, however, that those who advocated the method, of whom there were many, were in a continual position of defending it. This was, perhaps, because of the positions that had been taken up against it as described in this section.

This section has described how introspection might be defined as well as the arguments that arose as to its nature and efficacy in the early nineteenth century. It presents the background to the examination of the discussion on the use of introspection in psychology in Chapters Three to Six. The following section will give a brief summary of each chapter of the thesis.

1.4 Outline of the chapters

Chapter Two will describe the usefulness of conducting a historical study and what it can bring to the understanding of current research. It will also show the importance of this method of gathering data about psychological concepts and allow their emergence over time to be traced. It will argue, using the work of Foucault, Danziger, Hacking, Smith, Gergen and Richards, that historical, psychological work has much to contribute to the psychological debates about the nature, structure and conceptualisation of emotion and of the use of introspection in its study. Further, this chapter will describe and justify the sources that will be examined in the thesis.

Chapters Three, Four, Five and Six will describe the observation and description of emotion in psychology, predominantly in Britain and the US between 1850 and 1930, focusing mainly on the use of introspection as used to illuminate the nature of emotion. The chapters are roughly chronological, and they follow the process of the development of scientific psychology throughout this period from its roots in British associationist philosophy to the beginning of the behaviourist movement. Each

focuses on the work of the most prominent emotion theorists of the time as well as drawing on the work of some less well known theorists as a means to present a more complete picture of the way in which emotion was studied at this time. Each describes the place that introspection had as a method in psychology but also examines the extent to which other methods were used as a means to observe and describe emotion. The reasons for the use of particular methods will be elucidated and the ways in which emotion was understood described.

Chapter Three will cover the period of the mid to late nineteenth century when, following British philosophical tradition, introspection was the predominant method by which psychologists understood the mind and emotion in Britain and the US. It focuses on the work of three of the leading theorists of the time in those countries: Alexander Bain, Herbert Spencer and William James, but also describes that of those who are now less well known but were influential at the time, such as G.T. Ladd and James Sully. It will examine why each advocated the use of introspection as a means to develop an understanding of the mind and will look at how each used it in different ways to present different understandings of emotion. In doing so, it will show the perceived importance of the subjective experience of emotion at this time, as well as what were seen as the limitations of introspection. It will conclude by presenting an overview of the main findings of the introspective analyses of psychologists' subjective experiences of emotion.

Chapter Four will identify the use of objective methods of observation of emotion, and contrast these with the subjective method of observation of introspection. It will describe the way in which psychologists looked to physiology to provide more scientific descriptions of emotion in relation to its conceptualisation and measurement, and in order to demonstrate its universality and to discover patterns and laws which regulated the production of emotion. It will show how these were used as a means to make up for the perceived scientific deficiencies of understandings produced by the introspective method. It will then go on to describe the effect of the acceptance in psychology of evolutionary understandings both on the perceived value of introspection and on how the subjective experience of emotion was regarded. In doing so, it will examine the work of Herbert Spencer as well as Charles Darwin's work on

the expressions of emotion and, at the end of the nineteenth century, the US functionalist psychologists.

Chapter Five covers the work of the US psychologist, E.B. Titchener, and his 'systematic experimental introspection' which came towards the end of the nineteenth century and into the early twentieth century. It will describe how Titchener attempted to present introspection as an objective method through controlling the way in which it was conducted. It will analyse why and how he did so by examining the rules that he put in place to regulate the subjective experiences that psychologists produced. It will outline the dearth of experimental papers which were published about emotion using Titchener's method during this period and will examine the reasons why it was problematic to study emotion using this method. It will, however, go on to describe the attempts that *were* made by psychologists to investigate emotion in this way and what sorts of subjective understandings of emotion that resulted.

Chapter Six describes the ways in which introspection altered in the early part of the twentieth century in response to criticism as to its reliability. It will show how the turn to behaviour and the arguments against introspection were an attempt to rid psychology of a method that was deemed unreliable and of experience which was regarded as an epiphenomenon. It will describe the arguments aimed at the method and how it was stoutly defended by many psychologists who could not see a future for psychology without some kind of examination of the subjective experience of emotion. It will show that, despite the criticisms, the method survived in an altered form and that it continued to be used to study the subjective experience of emotion, albeit in a different form from Titchener's. The understandings of emotion that were produced using this form will be described by examining the papers presented at the first symposium on feelings and emotions at Wittenberg, USA

Chapter Seven will return to the research questions and present some conclusions as to how these can be answered, given the findings in the preceding chapters. I will then discuss the implications of the findings for the lack of consensus of the understanding of emotion and describe the contributions that this thesis makes to the existing literature.

CHAPTER 2

A HISTORICAL APPROACH

The purpose of this chapter is to present a case for a historical examination of the concept of emotion in order to better understand the problem of the lack of consensus of the definition. It will describe the use of what Danziger (2003) calls “historical psychology” as a means to understand present concepts or issues in psychology through the light of past developments, and will also explain the reasons why this approach is useful in contextualising the current situation. It will briefly outline the sources that will be analysed and justify the selections made.

2.1 Introduction

Only when we understand something of this historical embeddedness of specific psychological objects and practices are we in a position to formulate intelligent questions about their possible historical transcendence. (Danziger, 1993, p. 43)

As described, the problem of the definition of emotion has been dealt with through the examination of definitions of emotion in order to find commonalities between the various understandings that have been produced so that a consensual definition can be presented. Although this seems like a useful exercise in that it does seem reasonable to assume that if different aspects of emotion repeatedly recur in the work of psychologists, then these are likely to be the most salient, it is an approach which has, so far, proved fruitless in achieving the aim of consensus. The question then must be asked as to why this might be. One of the reasons for its lack of success is that attempting to address the current problem simply within the context of current psychological discourse places too narrow a focus on the issue and tends to ignore the broader issue of the reasons why emotion definitions have tended to proliferate

historically. The following quote from Solomon (2002) about the definition of basic emotions highlights the sense that it is not enough simply to understand emotion within current psychological contexts and discourses,

I would argue that the notion of “basic emotions” is neither meaningless nor so straightforward as its critics and defenders respectively argue, but it is historical and culturally situated and serves very different purposes in different contexts, including different research contexts...It is a subject with a rich history, and it is not one that can be readily understood within the confines of a technical debate in the Psychological Review. (Solomon, 2002, p. 124)

This statement could equally be applied, more broadly, to the issue of the definition of emotion itself. While it may be useful for psychologists to gather information about psychological definitions in order to compare them, the exercise does not provide an understanding of the context in which definitions and theories of emotion are constructed, nor does it examine why this problem has emerged in the first place. It makes the assumption that there is something about the nature of emotion itself that has caused the issue to arise. In order to deal with the matter in a way which gets to its root, it is necessary to put to one side the prevalent assumption that it has occurred as a result of the complex nature of emotion. In doing so, the focus is taken off asking questions regarding the character of emotion and placed, rather, on the means through which, and the contexts in which, emotion has been conceptualised. This allows for an understanding of the different ways in which emotion is constructed differently in different circumstances, and under different conditions, to arise and provides a broader basis on which to understand the reasons for the variety of definitions. It examines the meanings that the term holds in psychology and why it has been assigned these meanings.

The importance of history to the contextualisation of current psychological knowledge, although largely neglected in psychology today, was recognised early in psychology's history - “The historian of psychology must tell us what psychology is, in its largest aspects, by telling us whence its methods and concepts have come and what these mean for its further development” (Griffith, 1921, p. 17). By using history to look at how the concept of emotion has been defined in psychology at various points of time, it is possible to understand the reasons why the problem has arisen. This can be done by

examining the various conceptualisations of emotion and considering the contexts in which they emerged. By placing the problem of definition of emotion within a historical context we will be in a better position to understand the effects of the production of psychological knowledge on the concept. A historical examination allows for the influences, the constraints and the demands of the discipline to be highlighted and their effects on its concepts described.

It is important, however, to contrast the historical psychological approach with the way in which history is traditionally used in psychology. The history of psychology, or of emotion, is not ignored in psychological theorising but it is often used in quite careful and specific ways to justify particular theoretical positions, what Danziger (2010, p. 4) calls “justificationism”. So, although it is recognised in psychology that emotion is understood differently than it was in the past, that recognition is often set in a narrative of progression and advancement in its understanding (Gergen, 1996). For example, historical overviews of emotions research (e.g. Arnold, 1960; Gendron & Barrett, 2009; Kagan, 2007; Plutchik, 1980; Ruckmick, 1936) are produced with the particular purpose of justifying the particular theory or definition a theorist is attempting to promote. Further, literature reviews in scientific papers, where the past is presented in a framework of justification, are written in terms of a progression from study to study in order to identify issues to be addressed and to promote the presented hypothesis, method and results as valid and useful. The intention is to show how current theories or experiments progress the understanding of emotion by building on the work of previous psychologists. These justifications rework psychology's past to provide a basis for current research. As such, this type of history in psychology is an integral component to the construction of psychological knowledge. It perpetuates the assumptions that lie at the heart of psychological research, rather than addressing how these assumptions may influence current research and the present concepts. This contrasts with the use of history to describe, rather than to justify.

Kleinginna and Kleinginna's (1981) paper goes some way to attending to the issue addressed in this thesis historically. They use a historical approach, presenting an overview of 100 years of definitions of emotion in psychology. It is indeed useful in drawing together a range of definitions of emotion. However, their paper is inadequate in addressing not only the ontological or methodological context under which these

definitions were produced but also any sense that the definitions that they include have been influenced by particular views as to what a scientific theory or definition should achieve. As described in Izard's (2010) paper, in conceptualising emotion, psychologists may have different aims. Sometimes they are interested in the structures of emotion and sometimes the functions, for example. This is ignored by Kleinginna and Kleinginna's overview, and, further, the various movements that have happened in psychological science that may have culminated in the present situation are disregarded and there is an assumption that they are comparing like with like. Therefore, their use of history as a tool in which to understand the current problem is incomplete and inadequate.

Historical psychology, in contrast, allows for a much broader understanding of psychological concepts to emerge. It describes the purposes with which these are produced, presents the social and cultural context within which they have developed and seeks to understand the present through the light of past conceptualisations. Foucault (1969/2010, p. 5) stated in *The Archaeology of Knowledge*, that "The history of a concept is not wholly and entirely that of its progressive refinement, its continuously increasing rationality, its abstraction gradient...but successive rules of use and the theoretical contexts in which it developed and matured". The present situation, rather than being *justified* by the past must be *described* by the past. Examining the past can, therefore, be of use in understanding why current issues have arisen in the light of historical developments in psychology. As Danziger (2013, p. 829) stated recently, history "plays a more useful role within the discipline when it takes the current multiplicity of psychological objects as its point of departure and explores the social context of their emergence. This entails a historical analysis of the language used to define, describe, categorize, and modify psychological objects".

The following section will describe the ways in which historical enquiry will be used in this thesis to aid the understanding of the current issues of the continued proliferation of emotion definitions and lack of consensus. It will do so in relation to two particular concerns. First, a historical examination allows the various current conceptualisations of emotion to be understood in relation to the past contexts in which they have developed. Second, that it allows the effect of psychology as a human activity on the concepts of emotion that are produced to be considered.

2.2 The need for a historical examination of concepts

The first point to be discussed here is that exploring past contexts in which emotion was studied can aid in understanding the present problem. There are several advantages to this kind of historical exploration. First, it means that different conceptualisations of emotion can be compared and the reasons why these are different examined; second, the present situation can be understood in terms of the assumptions inherent in the methodological and epistemological legacies of past contexts; third, the particular reflexive effects of the production of psychological knowledge on the phenomenon that psychologists explore can be illuminated. In this section, these three distinct but connected points will be developed first and will be followed by a discussion of the view that history is also useful in understanding the effect of psychology as a human activity on the concepts it produces.

First, history allows for the current understandings of emotion to be compared with the past understandings of emotion that have been produced in psychology and it can show how and why the concept has altered over time. Although Kleinginna and Kleinginna (1981) present a range of different definitions, they choose to present these in terms of commonalities, rather than in chronological order. History can aid in the comparison between different conceptualisations of emotion because it allows for a wider context to be revealed. For example, Kleinginna and Kleinginna present the following two definitions: “Emotion...the association between certain widespread changes in ongoing operant behaviours and the presentation and removal of enforcers” (Millenson, 1967 as cited in Kleinginna & Kleinginna, 1981, p. 364); and “Emotions have in common the fact they involve appraisals elicited by external conditions which are of concern to us or which we have brought about or suffered” (Peters, 1970, as cited in Kleinginna & Kleinginna, 1981, p. 363). While these are both presented as scientific conceptualisations of emotion, these should not be taken at face value as comparable representations of the same concept, although both attempt to represent emotion and both try to get at something in relation to how emotion works. Without understanding, however, the broader historical and epistemological contexts within which they were produced, they are essentially meaningless. Each is bound up in a particular psychological tradition, which include particular approaches to study and

which use particular types of metaphors to define the concepts that are seen to come under the research remit of psychological science (Gergen, 1996). These two definitions are not far apart in terms of *when* they were stated but they are far apart in terms of the forms of knowledge they represent, the language that is used, and the methods each theorist would employ to research emotion. It is necessary to understand how and why these different forms of knowledge emerged in psychology to understand why these understandings of emotion have been formed. In conducting a historical study it is not simply the passage of time that is of relevance but rather that during the passage of time, different contexts have emerged through which emotion is viewed and studied.

To appreciate why psychological concepts are defined in different ways in different contexts we cannot simply treat them as good or bad representations of 'natural kinds' but rather they must be understood as being a production of the contexts in which they were formed. Although Griffiths (1997) and Scarantino (2012) go some way to addressing this, in that they recognise that emotions are often not 'natural kinds', they need to go further. They fail to recognise that, by the very act of studying emotion using particular scientific paradigms, something which may be a "natural kind", using particular "psychological" forms of language to describe it, alters it into a psychological kind (Hacking, 2002). Psychological kinds have, what Hacking calls, a historical ontology, existing only in relation to human history. In order to understand emotion, we cannot simply treat it as something biological which exists in the population, the facts of which can be discovered. We must acknowledge that its form owes much to the ways in which it has been viewed and understood at various points of time. It cannot be free of the language that has been used to understand it and it is the language and the metaphors that have been applied to it that need to be examined if we are to be in a position to understand why particular definitions have been produced. A historical understanding highlights more readily the changes in forms of psychological knowledge that the concept has been subject to at various points in history. This allows for an understanding of current psychologists as being the inheritors of these past understandings. For the concept of emotion this is particularly pertinent. As described, Dixon (2003) has shown how the scientific concept of emotion emerged most prominently in academic discourse in the early nineteenth

century. It is necessary, therefore, to understand what happened to the concept in academia from that point as emotion was studied within psychology if we are to understand the way in which it has come to be conceptualised and why the difficulties with its definition have arisen.

Secondly, the historical examination of the past contexts in which emotion was studied allows for an understanding of the epistemological and methodological legacies of scientific psychology to be revealed. It can provide an understanding of how these continue to affect the conceptualisations of emotion that are produced. The legacy that current psychologists have inherited from psychology's nineteenth century roots has been well documented (e.g. Bevan, 1991; Danziger, 2007; Gendron & Barrett, 2009; Richards, 2010; Smith, Harré & van Langenhove, 1995). To understand why the defining of emotion continues to be an issue for psychology it is necessary to understand this inheritance and what this means for the concept. Danziger (1997b, p. 8), for example, has argued,

The relevance of historical studies for the discipline of psychology seems to me to lie primarily in their potential for contributing to an understanding of the context of construction. As members of the discipline we have all been socialized to adopt certain prescribed practices and to communicate about our subject in terms of a specific received vocabulary. The nature and meaning of what we achieve depends on these practices and this vocabulary. We can certainly go on producing effects without ever reflecting on the context of construction that enables us to do so. But our understanding of what we are doing will be profoundly defective. For that to be remedied an appreciation of the historicity of our practices and our language seems to be indispensable.

The concept of emotion has undergone a process of construction over the course of time and attempts to define it in the present are not free from the constraining effects of previous usages, but rather these received ways of understanding exert a "tyranny" over current theorising (Gergen, 1996, p. 1). As Danziger (1982, p. 142) says, regarding the present, "scientific development cannot take place in a theoretical vacuum but must make use of the conceptual equipment bequeathed to it". This "conceptual equipment" has been shaped over time by the positions that have been taken up as to what valuable scientific knowledge is. It is important, therefore, in attempting to understand the present position of emotion definitions, to produce a history of the concept which shows, not only how it has changed but why it has

changed, to understand why particular definitions were produced at particular times, and to understand why some views of emotion became accepted and others didn't. In order to do so it is necessary to look at the ways in which these were justified by psychologists within particular paradigms of psychological knowledge and to examine the assumptions of psychological science.

It is necessary, also, to understand the development of the concept of emotion within the context of a developing psychological science and to examine the continuities and discontinuities that show how and why it has been shaped in the ways that it has. Returning to the early days of scientific psychology allows for the understanding of the premises on which it was founded to be revealed. It is not enough to take for granted that because current psychologists have formed a complex model of emotion that that is simply because emotion is a complex psychological phenomenon. It is necessary to understand something about the nature of psychological science in order to understand why the concepts of emotion that it has produced have been shaped in the way that they have. This tends to go unexamined by psychologists. As Slife and Williams (1995, p. 3) state, "The difficulty is that in the behavioral sciences, relatively little attention is paid to assumptions and implications. Students are often taught the various theories for understanding behavioral science phenomena, but rarely is their teaching enriched by directly examining the assumptions and implications hidden within these theories". Further, as Smith, Harré and van Langenhove (1995) describe, psychologists are often reluctant to step outside of their understandings of what valid scientific knowledge is in order to examine the conventions inherent within these understandings. History allows us to take a broader view of psychology and the concepts that it produces. It allows for the examination of its values to be examined. We can see where they have come from, how they are perpetuated, why they are valued, how they shape psychological knowledge and what the alternatives might be.

Further, as Richards (2010) argues, history maintains access to psychology's long-term memory. It can ensure that past problems are not repeated by examining why these have arisen before. A historical examination will also allow for a better understanding of the current problems to emerge because the current situation can be compared with the same problem of definition that was described as being an issue at the beginning of the twentieth century (Bentley, 1928). Rather than simply accepting

that this is how emotion or psychological science is, it is important to examine what it is about psychological science that such widely differing views of the same concept were, and continue to be, produced within the discipline. A history which reflects on the nature of psychological science, and what it is at different times and contexts, can provide a perspective from which to see the effect of the discipline on its concepts and to study both continuities and discontinuities over time and across traditions, providing a more considered understanding of the issue and increased awareness by psychologists of the common and repetitive issues that they face in dealing with the definition of emotion.

The third point is with regard to the issue of reflexivity. In taking a historical psychological approach to the concept of emotion, the purpose is not simply to produce a history which tells a story about the ways in which emotion has been viewed and studied at different times and contexts. It is to provide a historical examination of not only a scientific concept but also an everyday psychological concept on the basis that the work done by psychologists has the potential to affect how people understand and therefore experience their own emotions. For example, as Richards (2010) argues, it is clear from the changing language used, that emotions experienced today differ in substantial ways from those experienced in the nineteenth century. He says, that “we may see this in the shifts as the change from ‘worrying’ and ‘fretting’ to *suffering* from ‘anxiety’ and ‘stress’” (p.160). The former are active verbs, the latter passive, so in essence the feelings which these words describe have altered from something we do to something which happens to us. These changes reflect the “psychologisation” of emotion, changes which have taken place as a result of the dissemination of psychological discourse. The paradox for psychologists seeking to find a truthful definition of emotion is that, in using particular terms to define emotion they alter what they observe because the way that these are played out in everyday life is through the lens of the surrounding culture, including, in the West, the lens of psychological science. Smith (2007, p. 244) has argued, therefore, that history can teach us “what man has done and therefore what man is”. Although it will not be the focus of this thesis, it is important to bear in mind the constructive effects of the defining of emotion in psychology and that it matters how and why psychologists seek to understand emotion, because as they do so they are in the process of adding meaning to the

concept. A historical examination of the psychological concept of emotion, therefore, is also a study in the psychological phenomena of emotion, because the latter is shaped by the production of the former.

Finally, historical examinations of the production of understandings of emotion in psychology can highlight this as being a *human* activity. As Bevan (1991, p. 477) describes, “to insist on the objectivity of a science in terms of its separateness from the life experiences, intentions, values and world views of the persons who create that science is to deny its fundamental character as a human activity”. This characterisation of psychology is less pronounced today because psychologists present themselves as detached observers but was more obvious in the period of time which will be covered in this thesis where introspection was used to understand emotion. Studying how psychologists understood emotion through introspection is a means by which to understand how psychology and the development of understandings of emotion have been shaped by the experiences of theorists themselves. History can be used as a way of looking at what psychologists do, how they behave and the choices they make, putting the theories that they produce in context. Richards (1987, p. 203) states “Psychology claims to be the science of behaviour; being scientific is a form of behaviour of the most potent kind, its history involves such psychological matters as the nature of concept-formation, concept-change, communication, motivation and even perception”. This sort of history is not mere biography, but an acknowledgement that psychologists cannot be naïve, detached, objective observers of the phenomena that they seek to address. They are rather intimately bound up in their work in a way that shapes their findings in particular ways. As described in the previous chapter, it is difficult for psychologists to get away from the fact that, as human beings themselves, their experiences and viewpoints shape the way in which they conduct research,

Psychological knowledge continues to be the product of psychologists thinking, acting and interacting with others, and in particular ways that cannot be isolated from the wider social context that shapes the way people think and act, because psychologists are people too. (Lamont, 2013, p. 24)

It could be said the idea of the psychologist as an objective, detached observer has been constructed in order for psychology to be accepted as a science. Certainly, the way in which psychology papers are written in the third person demonstrates attempts to eliminate the taint of subjectivity from the research. If we are to understand why emotion has been defined as it has, we must understand the forms of behaviour under which it has been researched and why some forms of behaviour were acceptable at some times and not others. Examining a time in which the experience of the psychologist was very much accepted as part of the understanding of emotion allows for a different kind of psychological science to be described and compared with the role that psychologists take up today. It can demonstrate the effect of the inclusion of psychologists' experiences on the concepts they produce. Further, the historical examination of a time in which subjective knowledge was valued allows for the relationship between subject and object to be understood. As Smith (2007, p. 76) has argued, "in the human sciences at least, it simply is not possible at root to separate subject and object. The very act of acquiring knowledge, even in the most rigorously controlled situation, is a change in the life of both subject and object". In going back to a time in which the subjective experience of psychologists was an acknowledged aspect of the development of understandings of emotion, we can better understand how these contributed, and continue to contribute, to the concepts of emotion that are produced. In order to understand the assumptions inherent in the conceptualisations of emotion which were produced at the time it is important to analyse the ways in which both psychological science, its methods and its subject matter were discussed and debated by psychologists. This allows for the reasoning behind the epistemological and methodological choices that were made at the time to be elucidated and will aid in revealing the issues that have caused the defining of emotion to be problem in psychology.

2.3 Sources

The data for this study will be, largely, drawn from books and articles produced by psychologists between 1850 and 1930 which discuss the use of introspection and present understandings of emotion. There will be a particular emphasis on the way in which both scientific psychology, its methods and emotion are discussed and debated in the psychological literature of the time, in order to draw out the issues and assumptions that were important to the theorists of the period. Some of the sources presented in this thesis will, therefore, be analysed in some depth in order to illuminate some of the most influential ideas that were prevalent during the period. As Lamont (2007; 2015) describes, there is a benefit in understanding current issues from analysing the discourse used in historical sources because from these the arguments, expectations and agreements as to what is seen as valuable knowledge can be ascertained. It is through the discourse of the time that ideas about introspection and emotion were constructed. Therefore, these sources are the data of this study and segments of the original texts are presented, rather than being paraphrased, as the latter can have the effect of altering the intended meaning.

Prior to the late nineteenth century much of this work was in book form but from that period onwards the production of scientific journals meant that many papers on emotion and on introspection were published. Journals such as *Mind* (1876⁷), *The American Journal of Psychology* (1887), *The Psychological Review* (1894), *The Psychological Bulletin* (1904), and *The British Journal of Psychology* (1904), were issued as a means for dissemination of research conducted in psychology and these will also provide the source of data for the study. Given the vast amount of literature that has been produced by psychological science over time, it is, of course necessary to be selective for the purposes of both manageability and to maintain focus on the most relevant material. There needs, therefore, to be some criteria for the selections that have been made. With this in mind, the sources for this study have been selected using three main criteria. First, the period of time to be covered; second, the academic

⁷ The titles have been followed by the date of publication.

disciplines the sources are to be drawn from; third, geographical and linguistic boundaries.

The time period 1850 to 1930 has been selected for various reasons. Although many histories of psychology place psychology's origins with the advent of German experimental psychology, for the purposes of this thesis, the period prior to that is vital in understanding the development of the concept of emotion. As mentioned, the term 'emotion' began to be used in academia from the mid nineteenth century onwards. It was taken up by theorists such as Alexander Bain, Herbert Spencer and Charles Darwin who each incorporated it into their work. In seeking to understand how and why the concept developed as it did, and how introspection was used, examination of their work is vital. The period covered will end at 1930. This represents a point by which psychology had begun to display many of the characteristics which it does today. Several different schools of psychology had developed by this period and there was an acknowledged proliferation of understandings of emotion and confusion as to how to define the term. Secondly, in 1928, the APA Wittenberg Symposium of Feeling and Emotion was held. This drew the most prominent psychologists of the time and presents a snapshot of the state of the field in the early twentieth century. It represents a point of time in which psychologists were looking back and looking forward and presents reflections on the past developments and hopes for the future.

Particular criteria have been used in taking a sample of all the sources, books and journal articles on emotion available over this period of time. Apart from the early part of the study where the work of philosophers who have been referred to as 'pioneer psychologists' (Richards, 2010) has been examined, the work produced by scientific psychologists has been used. So although there was a wide breadth of cross-disciplinary work on emotion, except where these touch on the work of psychological science, through collaboration, criticism or comment, they are not considered. Obviously, the lines are not always so clearly drawn between disciplines, but this study aims to focus on the work of those theorists who would describe themselves or have been described as psychologists. In attempting to understand the interaction between definition, theory and method, the focus of the study is particularly on the effects of experimental psychology on psychological knowledge. As psychology was developing over this period it drew on other disciplines such as anatomy and

physiology so these too will be discussed, as will Darwin's work because it too was influential on the way in which the discipline of psychology was to develop. The work of some philosophers throughout this period was important in reflecting on the direction that psychology was taking and will also be drawn on.

Thirdly, given that versions of scientific psychology have, since the inception of the discipline in the nineteenth century, had a presence in academia in a number of countries, a decision has to be made about which and why particular psychological cultures and societies will be included in this study. The first criterion under this heading is that the sources studied will be written in the English language. The majority of the research discussed, therefore, will be drawn from work conducted in Britain and the USA. Although a large amount of work has been done in psychological communities throughout Europe, the focus of this study will be on theorists drawn from these countries. A coda must be applied to this criterion, however, in that it may be necessary to discuss in contrast, criticism or support, of particular views, work conducted by theorists from without these countries. So for example, where William James' theory of emotion is examined it will be necessary to discuss its relation to the theory of Carl Lange as these have been bound together in Psychology. The work that will be covered relates to some of the major movements in psychology over the period and will often be covered in some depth.

The chapter has described how and why a historical approach is appropriate for the presentation of an understanding of the current problem of the definition of emotion. It shows that there is a need to understand the contexts in which emotions definitions have been produced and the legacy of psychology's past. Analysing the ways in which the study of emotion developed through the examination of the sources from the period between 1850 and 1930 will allow for a better understanding of why this issue continues to present a challenge to affective psychologists.

CHAPTER 3

THE INTROSPECTIVE OBSERVATION OF EMOTION FROM 1850 TO 1900

The purpose of this chapter is, first, to show that introspection was regarded as *the* method of psychology by psychologists during the latter half of the nineteenth century and second, to examine how it was used to study emotion and to illustrate the sorts of descriptions of emotion that it produced. It will highlight the view that was prevalent at the time that emotion was a subjective experience or mental state which could only be observed through the use of introspection. It will describe, however, the problems that this view presented for the scientific understanding of the phenomenon.

3.1 Introduction

How we come to know mind: (a) the Subjective Observation...the direct, internal or subjective way. In following this we direct attention to a process in our own mind at the time of its occurrence or immediately afterwards. All of us have some power of turning the attention inwards on the successive movements or changes of our mental life. Thus we can attend to our emotions of joy and sorrow, love and hate, to our desires and motives and so on with a view to observe their nature, composition...and so forth. And this internal observation of mind can be indefinitely improved by exercise, and rendered exact and scientific. (Sully, 1892b, p. 3)

The mid to late nineteenth century was a time in which the credentials of psychology as a scientific discipline were being established (Danziger, 1990; Gergen, 1996; Richards, 2010). It was an era in which the subject matter of psychology and what methods psychologists should use to study psychological phenomena were a matter for much debate. Indeed even the question as to whether psychology could ever be classed as a science hung in the air. Much of the rhetoric of the work of early

psychologists involved arguments that the discipline could, indeed, rank alongside biology, physics and chemistry, in a claim to be scientific, particularly in terms of the methods that were used. As described in the section on introspection in Chapter One, Comte's arguments as to the unfeasibility of a mind studying a mind had left psychology out in the cold in terms of its claim to be a scientific discipline. Despite this, many psychologists, in utilising the method of introspection, followed Mill by resisting Comte's narrow view of science. They did, however, attempt to engage with his arguments by presenting a counter-argument: that psychology was indeed a science in the positivist sense of the term because it did involve scientific observation – the observation of the mental states or consciousness (e.g. James, 1890a; Titchener, 1898).

While introspection, as a method by which scientific evidence could be produced, was given a dominant role in the study of the mind, it was not as clearly defined by psychologists in the mid nineteenth century as it was to be later on in the century. Although the term was understood by most psychologists as the means by which to study the mental states, they did not go into detail as to what they were doing when they introspected. Until the end of the nineteenth century the method - later to be referred to, disparagingly, as "armchair psychology" by W.S. Scripture (Klein, 1942, p. 226) - was used fairly loosely. For associationists such as Alexander Bain (1818-1903) and Herbert Spencer (1820-1903), whose work will be described below, it was a vital way of delineating the mind but often it was not only the mental states that were being analysed through introspection, but bodily experiences and feelings also, especially when it came to understanding the emotions.

The study of emotion in the late nineteenth century seemed to go through something of a renaissance. Indeed, it has been claimed that these were "the Golden Years" of emotions research (Gendron & Barrett, 2009, p. 316), and a time that was to have a profound influence on subsequent understandings of emotion in psychology. The nineteenth century, according to US psychologist Madison Bentley (1928), was characterised by "its romanticisms, its naturalisms, and its humanisms" and "seems easily to have turned the reflective attention of men toward the feelings" (p. 17). It was an era in which there was, in literature, philosophy, anatomy and physiology for example, a profound interest in the emotions and their place in the lives of people

(Bentley, 1928; Brett, 1928). Indeed, almost every textbook on psychology contained a chapter which attempted to describe what emotion was and how the emotions could be classified (e.g. Bain, 1875; Baldwin, 1893; James, 1890b; Ladd, 1893; McCosh, 1880). Scholars in the German schools of physiological psychology were presenting descriptions of individual emotions in precise detail (James, 1890b) and it was during this period that William James (1842-1910) produced one of the most widely discussed and enduring emotion theories in psychology.

This interest meant that the questions of not only what emotion was but also where and how, it could be observed were important for psychologists at the time. For many of them the main source of understanding lay not simply in newly emerging sources of knowledge such as physiology and evolution⁸ but still, as it had done for centuries through self-observation, by the examination of their own bodies and minds. It was argued that the purpose of psychology was to study mental states or consciousness, and the only method by which to do so was through introspection, whatever the positivists might argue (e.g. Bain, 1855; James, 1890a). The nature of emotion as an internal, subjective state could not be revealed purely by examining its outward characteristics. As this chapter will describe introspection was, as a result, understood as being *the* method by which psychological phenomena could be understood. It was discussed as being so in all the chapters on method of the major psychological texts between 1850 and the early twentieth century. The following quote from Shadworth Hodgson (1832-1912), the English metaphysician, writing in the journal *Mind*, was typical of the argument for introspection in psychology that was put forward,

Psychology, then, differs from physiology in this, that it brings in subjective states as part of the general object...For its method it depends partly on Reflection...the subjective aspect must first be distinguished, before it can be separated, from the objective. But psychology is not the first science to make this use of Reflection, to adopt and employ the distinction of subjective and objective aspects. All the other sciences require it in the same way; the difference is, that they bring into their object-matter portions of the objective aspect only, i.e., Things, the external world; whereas psychology brings into its object-matter subjective states as such. (Hodgson, 1876, p. 226)

⁸ The effect of these on understandings of emotion and on the use of introspection to study emotion will be dealt with in Chapter Four.

As Hodgson's quote describes, introspection was seen as what made psychology distinctive from other sciences in a positive sense – it ensured that the subjective states, through which science was conducted were not neglected. Psychology needed to be engaged with both the internal as well as the external, the subjective as well as the objective, in order to present a complete understanding of the mind.

In order to explore what this approach to the study of psychological phenomena meant for the understanding of emotion during this period, the work of three of the most prominent emotion theorists of the time, Alexander Bain, Herbert Spencer and William James will be discussed in the following three sections. Further, the extent of the introspective study of emotion in the work of their contemporaries will be described. It will be shown, as the quotes from Hodgson and Sully above suggest, that in order to recognise, evaluate and understand outward displays of psychological phenomena, it was seen as vital that the inner, subjective experience of those phenomena must first be examined. It will be argued, also, that the method placed the psychologist and their experience very firmly within the process of the development of knowledge about emotion, rather than being a detached observer. The subjective understandings of emotion that were produced by these theorists through the use of introspection will be described, and a general picture of descriptions of emotion during this period shown.

The first section of this chapter will describe the work of the Scottish philosopher and psychologist, Alexander Bain, and will show how he used introspection to delineate the mind and to classify the emotions. Bain and his contemporary, Herbert Spencer⁹, have been said to be instrumental in setting the foundation for the discipline of psychology (Dixon, 2003; Richards, 2010; Robinson, 1995). These theorists, were not only the first to use the term “psychology” about their work (Dixon, 2003) but, it has been claimed, “did all but found experimental psychology” (Robinson, 1995, p. 279). They also attempted to observe and discern the nature of emotion using introspection. The second section of the chapter will, therefore, look at the work of Spencer in order

⁹ Dixon (2003) describes that, despite their influence on the future direction of psychological knowledge, Bain and Spencer's works have been given little attention by historians in relation to the studies of their contemporary, Darwin.

to evaluate the effect of his separation of psychology into objective and subjective analyses, and his use of self-reflection to produce the latter, on his descriptions of emotion. In the third section, the most famous nineteenth century psychological theory of emotion will be discussed: William James's (1884) so-called 'feeling' theory will be evaluated in the light of his arguments for, and use of, the introspective method and the extent to which his own experience of emotion underpinned the theory that he produced will be shown. In the final section of the chapter a brief but more general analysis of the work of a range of British and US psychologists will be examined. It will present an overview of the role of introspection in psychology in the late nineteenth century and the issues regarding the conceptualisation of emotion that these theorists described.

3.2 Alexander Bain: emotion as an element of the mind

Alexander Bain was a Scottish philosopher of the associationist school whose approach to the study of the mind was to classify it systematically and describe its composition. In an attempt to understand how mental states arose through the physical workings of the body, he did so by allying what physiological descriptions of the internal organs and the nervous system were available at the time with the doctrines of associationist philosophy. The purpose of the latter was to present the mind as a set of related 'ideas' and to understand how elements of thought might be related¹⁰. In writing *The Senses and the Intellect*¹¹ (1855)¹² and *The Emotions and the Will*¹³ (1859)¹⁴ Bain's goal was to present as full an account as possible of the human mind, the elements of which it was composed, and how these elements worked together to

¹⁰ For more on associationism see, for example, *A History of the Association Psychology* (Warren, 1921).

¹¹ *The Senses and the Intellect* will be referred to as *The Senses* for the rest of the chapter.

¹² Four editions of *The Senses and the Intellect* were published in 1855, 1864, 1872 and 1894.

¹³ *The Emotions and the Will* will be referred to as *The Emotions* for the rest of the chapter.

¹⁴ Four editions of *The Emotions and the Will* were published in 1859, 1865, 1875 and 1899.

produce particular behaviours. This “systematic exposition” in which Bain argued for a particular separation of the mind into three main elements, defined these elements and their sub-elements by the use of a mixture of personal reflection, associationist laws, and physiological descriptions. In his work, emotion, as one of the main elements, was not only defined, but a comprehensive classification of the emotions was also presented.

Bain, following the work of Thomas Brown, therefore, brought into focus what could be expected of a scientific psychology: that the mind should be systematically examined piece by piece, in order that a complete account of it was provided. In doing so, he was attempting to describe the mechanisms by which intangible phenomena such as sensations, emotions and volition were connected to the visceral and anatomical workings of the body. However, although he used physiological descriptions of the nervous system, the muscles and the anatomical structures of separate parts of the body, the books were very much focused on understanding how these explained the mental states and subjective experiences. He made it clear that the only way in which theorists could understand the minds and experiences of other human beings was through self-examination. They would then be in a position to infer from the result of that analysis what other people's experiences were.¹⁵ For example, in the introduction to *The Senses* he stated,

True, it is each in ourselves that we have the direct evidence of the conscious state, no one person's consciousness being open to another person. But finding all the outward appearances that accompany consciousness in ourselves to be present in other human beings...we naturally conclude their internal state to be the same with our own. (Bain, 1855, p. 2)

This approach, it was argued, was particularly required for the study of emotion because emotion was *felt* and, as such, was experienced in the body phenomenologically in a way that perception or memory, for example, was not. No one had access to another's feelings, so for a scientific understanding of emotion to

¹⁵ This is, in part, because Bain (1855) regarded other methods as not having produced a great deal of reliable evidence in relation to emotion – he felt that over time it may be possible to increasingly use more physiological and behavioural evidence to understand emotion.

emerge there had to be some way of observing emotion from within, and, therefore it was argued by Bain and, as we will see, many other theorists in the late nineteenth century, that a true understanding of emotion was only really available to psychologists from within their own minds and bodies.

As an examination of the ways in which Bain portrayed the experience of emotion through the use of introspection, the first part of this section will describe how he delineated the mind into different elements and the second part will discuss the way in which he classified the emotions. It will show that, although he sought to produce a delineation and description of the mind which was to some degree based on the physical, he viewed experience as being a more important source of knowledge because he believed that without it a physical description of emotion would have no meaning. Further, although Bain believed both should be studied in psychology, he viewed emotion, at first at least, as simply the subjective experience of emotion and the physiological and behavioural signs as mere “accompaniments” to the emotion itself. Physiological changes in the body might give rise to a psychological state of fear, for example, but these were not part of the emotion itself. The only place, therefore, to truly observe an emotion proper was for each person to examine their consciousness.

3.2.1 Bain's delineation of the mind using introspection

As has been stated, in the nineteenth century there was an increasing interest in the study of the emotions. In philosophy, Thomas Brown's (1822) lectures had provided a platform for emotion, as a concept, to be raised to an eminent position in comparison to other terms for affect (Dixon, 2003). Emotion was a psychological concept which was developed in relation to Brown's argument for psychology as being a kind of ‘mental chemistry’, in which, the mind could be divided into separate elements, each being defined and studied independently. Therefore, one of the main questions for the emerging psychologists of the mid nineteenth century, as it had been for philosophers for hundreds of years, continued to be in regard to how the mind should be divided up.

Given all the different human experiences and behaviours, as well as the various terms that had developed over time to denote particular psychological concepts, for example, consciousness, the will, memory intellect and perception, if psychology was to be a scientific endeavour, psychologists must decide which of these were to be used, firstly, to denote the main elements of which the mind consisted and second, what sub-elements were required to present a complete delineation.

The past centuries had already provided some suggestions as to how the mind should be divided. Plato, for example, had suggested three basic components: the reasoning, the desiring, and the emotive. At the beginning of the nineteenth century, Brown (1822) rejected the traditional two-fold division of Thomas Reid into Understanding and Will in favour of one that comprised three elements - sensations, thoughts and emotions. Bain (1859), similarly, adopted a threefold division of the mind. For him the sensations and the emotions appeared to be too close together, or similar in nature, to be separated. Although he accepted that *the Will* was certainly a main element of mind, he viewed Reid to be incorrect in subsuming emotion within that heading. Rather than leaving the emotions under the head of *the Will*, he therefore separated these out, and made use of the work of several philosophers in defending this three-part model by citing the, similarly tripartite, divisions of Brown, William Hamilton and Dugald Stewart.

The analysis of his own mental states, as it had been for these philosophers, was the key to his understanding. Indeed he quotes Hamilton, as having achieved his division through introspective analysis.

Sir William Hamilton, in remarking on the arrangement followed in the writings of Professor Dugald Stewart, states his own view as follows: — 'If we take the Mental to the exclusion of Material phenomena, that is, the phenomena manifested through the medium of Self-consciousness or Reflection, they naturally divide themselves into three categories or primary genera; — the phenomena of Knowledge or Cognition, — the phenomena of Feeling or of Pleasure and Pain, — and the phenomena of Conation or of Will and Desire.' Intelligence, Feeling, and Will are thus distinctively set forth. (Bain, 1855, p. 7)

Although Bain used supporting evidence in the form of physiological observations he did not rely on these as being the main evidence for the classification. In *The Senses*,

he discussed the work of a Dr Sharkey, whose own understanding of the brain and nervous system had caused him to propose a quadruple division, of intellect, will, sensation and emotion. Bain rejected this division and chose, rather, to mould his own, placing the sensations in the same division as the emotions. He thus disregarded the physiological evidence in favour of his introspective analysis of emotion. This is not surprising given that he argued in a later edition that,

The study of the mind, as a science, must contain an element of introspection. There is a difference of opinion as to what ratio this should bear to the objective study of the physical concomitants of the mind. Some psychologists define the science of mind, as the science of the facts of Consciousness, meaning Self-consciousness or subjectivity. The only tenable position is the combination of both. (Bain, 1872, p. 689)

At the start of his treatise he stated, “Mind, according to *my* conception of it, possesses three attributes, or capacities. 1. It has Feeling¹⁶, in which term I include what is commonly called Sensation and Emotion. 2. It can Act according to Feeling. 3. It can Think” (Bain, 1855, p. 1). However, at the beginning of *The Emotions*, he claimed, “Mind is comprised under three heads, - Emotion, Volition and Intellect” (Bain, 1859, p. 2). Using introspection, Bain had broadly delineated the elements that he understood as being the ones which mainly define a mind. He struggled, however, to settle on a word for the affective element, equating emotion with both feeling and consciousness. Sentience was a necessary aspect of being human; indeed, Bain gave emotion or feeling, or consciousness, the most prominent place in the mind. He stated that, emotion was the “foremost and unmistakeable mark of a mind” (1855, p. 2). His difficulty in explaining what it was, however, is apparent in that he directed the reader to their experience for a definition,

A Definition should itself be intelligible, and composed of terms not standing in need of further definition. Thus, for a notion of what feeling is, I must refer each person to their own experience. The warmth felt in sunshine, the fragrance of flowers, the sweetness of honey, the bleating of cattle, the beauty of a landscape, are so many known states of consciousness, feeling, or emotion. (1855, p. 2)

¹⁶Although he says the *feeling* is both *sensation* and *emotion* here, Bain tended often to use the terms *feeling* and *emotion* interchangeably in the first edition. Indeed he used the term *consciousness* also as an alternative term to these.

The difficulty of defining emotion scientifically was clear in Bain's work. Emotion, as an abstract ephemeral and intangible psychological phenomenon, was best understood within each person's experience. In order for psychologists to study emotion, it was necessary, however, that they were able to provide clear and adequate definitions of the phenomena that they were investigating. According to Bain's introspective analysis, the term *emotion* encompassed all sorts of different psychological states, "Emotion is the name here used to comprehend all that is understood by feelings, states of feeling, pleasures, pains, passions, sentiments, affections. Consciousness, and conscious states also for the most part denote modes of emotion" (1859, p. 3). Emotion was a broad, complex and multifarious phenomenon. Emotion as a feeling, however that feeling may be defined, was what most informed Bain's definition of emotion. Investigations into the potential underlying biological or neurological mechanisms were in their infancy, and it was not possible to connect the elements of the mind to the physiology of the body in anything but the most rudimentary manner. Introspection, on the other hand, gave theorists direct access to emotion in a way in which no other method could.

Bain's tripartite conception of the mind, based on his own, and others, introspective analysis, continued to be used throughout the nineteenth and early twentieth centuries as a template by which the elements of the mind could be studied (e.g. Sully, 1893). It influenced where the investigations of psychologists were directed and what they saw as being of value in understanding the mind and human behaviour and, in presenting people as being predominantly feeling creatures, led the way for the scientific study of emotion. It also helped to heighten the profile of the emotions as a subject worthy of study in psychology. Further, as will be discussed in the following section, Bain's scientific classification of the emotions was the first attempt at a taxonomy of emotion which, although grounded in his own experiences, was configured along the lines of the conventions of a natural science.

3.2.2 The classification of the emotions

In attempting to classify the varieties of emotion, Bain (1855) resorted to the use of two main scientific methods, the Natural History method and the method of introspection. First, he used the Natural History Method as a template on which he intended to develop a scientific and precise classification of the emotions. Bain admired the work of the theorists that had used the method to produce taxonomies for the sciences of mineralogy, botany and zoology which classified minerals, plants and animals into genera and species. He, therefore, set out to do likewise in relation to the emotions, through discriminating between them on the basis of particular characteristics,

Such is my model for the Natural History of the Feelings. In the present chapter, entitled "Emotion in General," I enumerate all the facts, attributes or properties that in various degrees attach to the special emotions, and in the order most natural for exhibiting those properties intelligibly; choosing instances to illustrate the meaning of the generalities. In the chapter subsequent to the second, I give the families and species of emotions in detail, and state for each species to what extent these properties attach to, and constitute the specific characters of, that species. (Bain, 1855, p. 24)

It was clear, however, that this method was only as accurate as the *observation* of the characteristics of the phenomena that were to be classified. While the scientists who studied minerals, for example, classified these in relation to physical attributes such as “hardness, tenacity, optical peculiarities, phosphorescence and composition”(p. 23), the question that Bain had to answer if he was to achieve a similar classification was, ‘What are the defining characteristics of the emotions?’. It might be expected that Bain, like the mineralogists and botanists, would simply look to physical properties; movements of the body accompanying emotion such as facial expressions and visceral changes are described in much of *The Emotions*. However, although these were used in the classification, they were not sufficient, in Bain's eyes, to describe or define the emotions themselves.

In order to observe the emotions for classification the second scientific method that Bain advocated was self-examination as a means to look at and examine what he called “the Feeling, proper”. He stated, “Our own consciousness, formerly reckoned the only

medium of knowledge to the mental philosopher, must, therefore, be still referred to as a principal means of discriminating the varieties of human feeling” (Bain, 1859, p. 57). Because emotion, as he saw it, resided only in the consciousness of individuals, it was only with recourse to the consciousness of an individual that these could be viewed. After having set out the physical characteristics which he saw as accompanying an emotion, for example, the muscular expressions, “the diffusive action” in the nerves, and the actions of the secreting glands, he then went on to set out the mental and experiential aspects of emotion on which the classification depended.

Using a mixture of metaphor, anecdote, parallels in the sciences, and personal reflections, Bain demonstrated how the emotions might be distinguished and classified using introspection. The intangibility of emotional experience was to be given some shape and formed into something that resembled a scientific enumeration. The aspects of emotion he identified as being the main means of delineation were recognisable characteristics of everyday emotional experience. In producing the classification he started by making “the first broad distinction that of Pleasure or pain” (p. 29). Next, he divided the emotions into groups depending on the magnitude of pain or pleasure they exhibit, “and the next is the difference of degree...quantity and intensity as rendering the statement of degree more specific” (p. 29). A further distinction was made in terms of the quality of the emotion,

It is not by virtue of mere amount or intensity that some pleasurable impulses give a satisfaction only for the moment and others continue to live in idea, or to vibrate long after the stroke has ceased. This is a distinction of quality. A piece of good news, received in the morning, enlivens the mind for the entire day; the sweetest taste, when withdrawn, ceases to touch any chord of delight. (Bain, 1859, p. 29)

Further, on the aspect of quality, Bain went on to show how different emotions alter depending on the environmental stimulus that has caused them. “The feeling produced by a great work of art is quite different from the pleasure of gain, or from an outburst of affection — all have something in common, but yet in each there is a quality peculiar and characteristic” (p. 30).

Finally, before he proceeded to describe each emotion in detail, he described a particular technique by which emotions can be scientifically distinguished by introspection. “When different emotions occur together, or in close succession, there is an opportunity of comparing them, and the mind then recognises similarity or diversity of quality or degree” (p. 30). He also describes how amounts of pleasure or pain can be measured by using a practice more often found in chemistry,

Just as acids are pronounced equivalent when in amount sufficient to neutralize the same portion of alkali, and as heat is estimated by the quantity of snow melted by it, so pleasures are fairly compared as to their total efficacy on the mind, by the amount of pain that they are capable of submerging. In this sense there may be an effective estimate of degree which shall include all the three characters above distinguished, under the heads of mass, acuteness, and quality. (p. 30)

Thus, Bain (1859) produced what he viewed as a scientific classification of emotion based on an examination of his subjective experience and mental processes. He described nine special emotions: the law of harmony and conflict; the law of relativity, e.g. wonder and curiosity; terror; tender affections; emotions of self; power; the irascible emotion or anger; emotions of action and the exercise of the intellect. Examples of each were given, and their natures described in relation to the characteristics above. Emotions, he argued, could be classified in relation to particular characteristics and described as individual elements of the mind because “We recognise such generalities as pleasure, pain, love, anger, through the property of mental or intellectual discrimination that accompanies in our mind the fact of emotion. A certain degree of precision is attainable by this mode of mental comparison and analysis” (p. 57).

However, if this was to be a scientifically useful enumeration of the relevant aspects of emotion, it must be applicable not only to himself but must also be generalisable to other people. The classification could not simply be the description of Bain's mind alone, as interesting as that might be, but must be a template on which to base an understanding of other people's mental states. The problem, of course, as Bain pointed out several times in his work, is that scientists do not have access to other people's experiences and feelings. The question then arises as to how psychologists can know what people are experiencing. Bain addressed this question as follows,

The expressive gestures growing out of the diffusive stimulus, the volitional energies stimulated, the influences upon the intellectual trains, and all the appearances that result from various combinations of these, are our means of judging of what is passing in the interior of the mind. When to all these we apply our own consciousness as a medium of interpretation, we have done all that the case admits of. Having lain on the watch for all the significant acts of another man's mind, we refer to our own feelings, and endeavour to arrive at some one mode of consciousness in ourselves that would have exactly the same accompaniments. This is to us what the other man feels. (1859, p. 50)

Self-examination was, therefore, for Bain, a vital element in the process of evaluating the emotions of other people. Emotion, if it was to be defined as a mental state, could only be observed from within. Although the physical accompaniments may be viewed, the emotions themselves remained hidden and the only way for the psychologist to understand them was to view the expressional aspects and connect them to his own particular experiences.

There was still an issue, however, with the representativeness of each theorist's introspective view of emotion as Spencer (1868) pointed out in his essay on *The Emotions*. He said of Bain's classification, "Mr Bain in confining himself to an account of the emotions as they exist in an adult civilised man has neglected those classes of facts out of which the science of the matter must chiefly be built" (p. 257). Spencer argued that the Natural History Method was rather a method that was intended to record evolutionary adaptations and developments in the classes of phenomena it described. Bain's method did not do so because he could not examine the emotions internally as they existed in less evolved organisms such as animals or 'savages', as theorists of the time tended to call the indigenous people of other, less 'civilized' countries. In response, Bain, in the second edition of *The Emotions* dropped any mention of the Natural History Method but continued to resort to his own consciousness as a means of classification, arguing a little less strongly than previously, that theorists should not, "supersede a reference to our own direct consciousness of them, and our observation of their workings in other beings" (1865, p. 36).

3.2.3 Conclusion

This section has shown that Bain, far from viewing introspection as being unscientific as Comte had suggested it was, saw it rather as a vital method by which to observe the mind and discern its elements and felt that without it, a psychological science would be impossible. His use of introspection to delineate the mind and describe its elements and to classify the emotions was based on a view that it was from the subjective perspective that the mind and emotion could be understood. His conceptualisation of emotion was based on what it was like to experience emotion and although he embraced other understandings, these were to be used as a means to understand that experience, for example, to describe what actions or physiological responses might accompany the emotion as it occurred. As will be described in the following section, Spencer too argued for the need for the introspective method, despite differences between himself and Bain in terms of the broader frameworks of psychological knowledge in which they each developed their views of emotion.

3.3 Herbert Spencer's subjective psychology

This section of the chapter will discuss the work of Herbert Spencer, his conceptualisation of psychology and of emotion. In 1855, Spencer published *The Principles of Psychology*¹⁷ a treatise on the subject matter of psychology and the methods by which the mind should be examined. Spencer's advocacy of evolution figured quietly in the first edition, due to its general lack of acceptance in academic circles, and more strongly in the second edition which was published in 1870, after Darwin's *Origin of Species*. Following the second edition of *The Principles*, Spencer's evolutionary associationism¹⁸ and advocacy of comparative psychology emerged as a

¹⁷*The Principles of Psychology* will be referred to as *The Principles* in the rest of the chapter.

¹⁸This encompassed the idea that associations are hereditary and when repeated in successive generations become cumulative so that there is a compounding of simple states into those that are increasingly more complex.

profound influence on the way in which psychology was to develop, particularly in relation to the later development of behaviourism (Boring, 1929). Spencer's psychology relied on the idea that the associations between mental states as developed through evolution, could be discovered in part through introspection, so that, although Bain and Spencer fundamentally disagreed with each other on the efficacy of evolution as a useful framework with which to understand the human mind (Bain, 1865), they were agreed on the efficacy of introspective analysis as a means by which the theorist could explore the mind and discover from what it was formed. Both, although they would have claimed themselves to be positivists (Dixon, 2003), held out against the Comtean position that introspection was mere metaphysical speculation and had no place in a discipline purporting to be scientific. They also both followed J. S. Mill in his defence of the use of introspection from attacks from those such as German philosophers Kant and Leibniz, who, as was discussed in Chapter One, argued that introspection as a method of philosophical analysis was not tenable because mind was not the equivalent of consciousness and, therefore, to examine the latter would not produce an accurate account of the former (Danziger, 1980).

For Spencer, as will be described below, psychology had two sides, the subjective and the objective. The following sections will, first, describe how he conceptualised the different roles that these played in the development of psychological knowledge and second, will show how he developed a subjective understanding of emotion through the use of introspection. The third part of the section will go on to demonstrate his views on the uses and limitations of introspection for the study of emotion.

3.3.1 Psychology as subjective and objective

For Spencer, the fact that psychologists were looking not only at the objects in the world but the internal workings of the mind was something that distinguished psychology from other sciences in a positive sense. In the first edition of *The Principles*, he stated that,

The claims of Psychology to rank as a distinct science, are thus not smaller but greater than those of any other science. If its phenomena are contemplated objectively, merely as nervo-muscular adjustments by which the higher organisms from moment to moment adapt their actions to environing co-existences and sequences, its degree of speciality, even then, entitles it to a separate place. The moment the element of feeling, or consciousness, is used to interpret nervo-muscular adjustments as thus exhibited in the living beings around, objective Psychology acquires an additional, and quite exceptional, distinction. (1855, p.141)

This distinctive science could achieve something that no other science did. While all other sciences produced descriptions of the objective world, psychology studied both the objective and the subjective. Further, as Spencer pointed out, without the subjective aspect the objects that psychology studied would be mere descriptions of the physical correlates of the subjective phenomena, which was, after all, the *true* subject matter of even an objective psychology.

To those who see that the essential conceptions on which Psychology in general proceeds, are furnished by subjective Psychology — to those who see that such words as feelings, ideas, memories, volitions, have acquired their several meanings through self-analysis, and that the distinctions we make between sensations and emotions, or between automatic acts and voluntary acts, can be established only by comparisons among, and classifications of, our mental states; it will be manifest that objective Psychology can have no existence as such, without borrowing its data from subjective Psychology. And thus perceiving that, until it acknowledges its indebtedness to subjective Psychology, objective Psychology cannot legitimately use any terms that imply consciousness. (Spencer, 1880/1896, p. 141)

Spencer's psychology, therefore, was a dual-aspect discipline. Objective psychology dealt with the physical workings of the body, the observable data of a positivistic science. Essentially, objective psychology was everything except for consciousness; for example, physiological psychology which was “limited to such data as can be reached by observations made on sensible objects” (1870, p. 48). Subjective psychology, therefore, covered what was left: the “data wholly inaccessible to external observations” (p. 48) - data, which according to positivist doctrines, had no place in the building up of a scientific body of knowledge. While, as has been described there was little explicit discussion as to how introspection was used or what it was used to examine, in Spencer's work it was used in two ways; to examine his experience as a

means of producing descriptions of the elements of the mind and to produce a theoretical analysis of the mental states. These will each be described below in relation to his study of emotion.

3.3.2 Spencer's subjective descriptions of emotion

In the first and second editions of *The Principles* Spencer presented a chapter on emotion¹⁹, its nature and its relation to other aspects of the mind. In it he demonstrated that the mental states, as examined through reflection on experience, were not always in line with what his intellectual and philosophical leanings told him about how the mind was constructed. He was particularly concerned with the contrast between emotion and cognition as subjective experiences when examined introspectively and the way in which he thought they should present themselves according to the doctrines of evolutionary associationism. At the beginning of the chapter he stated, “Habitually contemplating the contrast between the cognitive and emotive faculties from a subjective point of view, we conclude that it is a strongly marked contrast; and to say that there is really no line of demarcation between reason, and sentiment or passion, will, by most, be thought a contradiction of direct internal perceptions” (1855, p. 584). Spencer's experiential analysis of emotion demonstrated a separation between emotion and reason. However, in contrast, his intellectual analysis affirmed a quite different position, that, “if all mental phenomena are incidents of the correspondence between the organism and its environment; and if this correspondence is a thing of degree, which passes insensibly from its lowest to its highest forms; then, we may be certain, *à priori*, that the Feelings are not, scientifically considered, divisible from other phenomena of consciousness” (p. 584).

Further, Spencer went on to describe the way in which the emotions must have evolved at the same time as memory and reason because these three were all higher processes

¹⁹The chapter is called 'The Feelings'. Spencer uses the terms feelings, emotions, passions and sentiments interchangeably as terms for affect that are not sensations.

which could be distinguished from lower psychological states such as reflex action and instinct. Thus, he argued, these had all evolved as conscious rather than subconscious states but had differentiated separately according to particular characteristics so that they had become internally distinguishable, even though their evolutionary beginnings meant that they were fundamentally related. These may be clearly discerned he said if, for example, we compare “an inference and a fit of anger” (1855, p. 584). However, if we contemplate a beautiful statue or listen to music, the impressions that we receive are a mixture of both intellectual and felt. There is a connection in the mind between the perception and the meaning and the emotion that is produced and these are inseparable. At times, then, in subjective experience emotion can appear as being a very different kind of mental element from reason, at other times the two are so bound up in experience that they are indistinguishable.

However accurate his assertions about the origins of mental processes were, Spencer's analyses of experience in the light of evolutionary associationism enabled him to present a complex view of emotion. He showed how it could be viewed as both as being an individual mental state, which when subjectively contemplated could be understood as being distinct and isolated, and that it could also be seen as part of a more complex whole, that of consciousness. The implication, therefore, that to simply contemplate emotion in isolation neglects its relationship with the other processes to which it gives meaning and which in turn give it meaning. He showed that there was a need to contextualise emotion both in terms of other processes and in terms of the situations in which emotions arose. For example, he showed the relation of memory to emotion and the way in which current emotions are generated through past experiences of the connection of emotion with particular circumstances, such as a beautiful scene. However, the intangibility of emotion as an experience meant that Spencer's combination of inner reflection and evolutionary associationism were not as useful in the differentiation *between* emotions, as will be shown in the following section.

3.3.3 The uses and limitations of introspection

In the final edition of *The Principles* Spencer (1880/1920) presented the need for, and the limitations of, introspection when it came to the analysis of emotion in psychology. First, he argued that for the feelings, which he separated into sensations and emotions, the only reason for the objective study of the nerves by physiological psychologists should be to contribute to the understanding of the subjective states. Examinations of the nerves alone could not provide the data on which to base a psychology of emotion. Further, because the proofs for the existence of feeling that physiologists and pathologists accumulated were based purely on a physiology of animals, their understanding of the production of human feelings was an indirect one and limited in what it could reveal. The only means by which psychologists could understand the connection between the nerve centres and the feelings that these produced was through the method of introspection and it was only when the relationship between these had been established, that emotions could be properly understood. Therefore, Spencer argued, it was only through self-reports of the human experience of emotion that the two could be connected, where “the reader imagines a nervous system contained in his own body, and concludes that his sensations and emotions are due to the disturbances which the outer world sets up at its periphery, and arouses by indirect processes in its centres” (p. 100). There was, he argued, both in science and in everyday life, a useful assumption that the experience of the observed is the same as the observer. Although there may be individual differences in terms of emotional response, we can rely on this assumption to provide a general picture of the subjective experience of emotion based on our own. The subjective experience of the theorist was sufficient evidence on which to base a psychology of emotion.

Secondly, in contrast, Spencer (1880/1920) considered that there were limits to the use of introspection in the analysis of the emotions. Although it could be used to examine the experiences that emotions produced, it could not be used in the way in which Bain has done so, to classify the emotions. His rhetoric against Bain's use of introspection in producing a classification of emotion by means of self-analysis was developed theoretically in the second volume of the final edition of *The Principles*. In it he moved

from the objective part of the treatise to the subjective where he intended to discuss and analyse the elements of consciousness. Anticipating that the reader would expect to find the emotions in this section, he explained why the emotions were not to be considered there: “a sentiment is altogether vague in its outlines, and has a structure which continues indistinct even under the most patient introspection. Dim traces of components may be discerned; but the limitations of the whole and of its parts are so faintly marked, and at the same time so entangled, that none but very general results can be reached” (p. 4). Spencer did not appear to mean that emotions themselves are entirely indistinguishable in consciousness because, in sections of the previous volume, he discussed how different emotions such as fear and anger might arise. Rather, what he was suggesting was that these cannot be analysed in a structured way and that in terms of his own experience and of the laws of association, the intangible and ephemeral emotions did not fall neatly into a clear arrangement. This was not an unusual conclusion for the introspectionist psychologists of the nineteenth century, as will be described later. Spencer accounted for this difficulty in a particular way, by interpreting this experience in terms of the associative and evolutionary development of emotion: that the emotions had evolved from compounds of “clusters upon clusters” of heterogeneous simple feelings into larger heterogeneous clusters meant that these could not be easily separated (p. 4).

3.3.4 Conclusion

Spencer's contention that psychology be both subjective and objective provided an argument for the preservation of the method of introspection for psychological science. For Spencer, however, there were two understandings of introspection: an experiential introspection which was used to comprehend the phenomenology of emotion, and an intellectual introspection which enabled him more particularly to apply the laws of association and evolution. While Spencer found that his experience of emotion was not always in line with his belief as to how emotion should present itself, this did not cause him to mistrust experience, but, rather, to attempt to examine why this might be. This section has shown, therefore, that the experience of the psychologist was viewed

as a valuable and reliable source of evidence about emotion for psychologists at the time.

This was certainly the case in the work of William James. In the following section, James's theory of emotion will be examined in the light of his arguments for the use of introspection. James's argument that, rather than being a subjective method, introspection was an objective method, even if it did examine subjective states, will be described, and his understanding of emotion analysed in light of his use of introspection.

3.4 William James: the experience of emotion

The work of William James needs very little introduction. James left a lasting legacy on the development of the discipline in the US and on the field of emotions research. Whether or not his theory has helped or hindered the understanding of emotion has been a matter of debate for the last century (Ellsworth, 1994; Lang, 1994; Dixon, 2003), however, there is no doubt of the impact that it has had in psychology. At the time it was written it produced an enormous level of debate (Gurney, 1884; Irons, 1894; Marshall, 1884a; Titchener, 1915); almost fifty years after it was first published it was still being critically evaluated by the major theorists (Bentley, 1928); and no chapter on emotion in any modern psychology textbook is complete without a rendering of James's 'feeling theory'.

At the time he wrote it James had seen the need for a theory which could supplement the vast array of detailed physiological descriptions of individual emotions which were coming out of the German schools of physiological psychology at the time. Once psychologists had a coherent understanding of emotion, a theory, or what James termed, "the goose that lays the golden egg" they would not, he argued, need to keep producing these tedious accounts (1892, p. 449). Like Bain and Spencer, James was far from opposed to other methods of inquiry in psychology, however, as will be discussed, he defended the supremacy of introspective accounts above all other

methods in psychology against the attacks that had been made by Comte and, although James described the three methods of psychology as being introspection, comparison and experimentation, the only one of these which James himself practiced was the first. As Boring (1950) describes, although James encouraged experimentalism in the US as a means by which to practice psychology, he did not carry out any experiments himself. As a result, his work was strictly theoretical and, although informed to some extent by the other two methods he described, like Spencer's and Bain's, his work was first and foremost developed through inner reflection. In contrast to many current discussions of James's theory in the literature which try to present re-evaluations of it and its explanatory power, here it will be discussed, not in terms of how well it explains emotion, but in terms of how it was developed in relation to James's belief in the efficacy of introspection and the understanding of emotion as a subjective experience. The first part of this section will show that James argued strongly for the requirement for introspection in psychology and that this was done in relation to both the purpose and subject-matter of psychology. In the second part of this section, James's theory will be evaluated in light of his use of introspection and it will be shown that his own subjective experience of emotion was important both in the development of the theory and in its defence.

3.4.1 The importance of introspection in James's work

William James was in no doubt about the need for the method of introspection in psychology:

Introspective Observation is what we have to rely on first and foremost and always. The word introspection need hardly be defined - it means, of course, the looking into our own minds and reporting what we there discover. Everyone agrees that we there discover states of consciousness. So far as I know, the existence of such states has never been doubted by any critic, however skeptical in other respects he may have been...I regard this belief as the most fundamental of all the postulates of Psychology, and shall discard all

curious inquiries about its certainty as too metaphysical for the scope of this book.²⁰ (James, 1890a, p. 185)

As has been shown in the work of Bain and Spencer, these theorists' advocacy of introspection as a method of observation in psychology, and their holding out against the arguments against it, existed in relation to their views on the purpose of psychology and its subject-matter. James's defence of introspection against the arguments of those such as Comte (1830 cited in James, 1890a, p. 188), who believed that introspection was "a pretended psychological method" which was "radically null and void", was similarly set against the background of his views of the attributes of a body of psychological knowledge which would be meaningful and useful as is described below. This section will describe James's advocacy of introspection in relation to what he believed psychology was and what psychologists should study.

Psychology was, James (1890a) claimed, a "natural science". It was "the Science of Mental Life, both of its phenomena and of their conditions. The phenomena are such things as we call feelings, desires, cognitions, reasonings, decisions, and the like" (p. 1). Although it was the science of consciousness, it was important, he believed, to allow psychology to be "as vague as its subject" (p. 6), and to also examine the bodily experiences, particularly as these related to the physiology of the brain and nerves from where the mental processes were initiated. These other kinds of evidence were useful in order that the mechanisms by which the mental states arose could be described, although they were not, for James, the main subject-matter of psychology. That he set out in a table:

1	2	3	4
The Psychologist	The Thought Studied	The Thought's Object	The Psychologist's Reality

(James, 1890a, p. 184)

²⁰Dixon (2003) states that James gave a limited role to introspection. This is true to some degree because, as will be shown, he believed that the method was vital for psychology, he did not believe that it was the role of psychologists to use introspection to produce statements as to the metaphysical basis of psychology, what he called the "ultimate puzzles"(James, 1890a, p. 184). These should not be examined by psychologists any more than they were by botanists, zoologists and chemists.

These four squares, he stated, contain “the irreducible data of psychology” (p. 184). “The psychologist believes No's 2, 3, and 4, which together form *his* total object, to be realities, and reports them and their mutual relations as truly as he can” (p. 184). The psychologist was to examine his own experience or understanding of, for example, the emotion of fear, and present his own analysis; his “reality”. Unlike Spencer, James did not divide psychology into objective and subjective endeavours. The end product - the “psychologist’s reality” - as James saw it, was an objective account from reflection on the objects of consciousness, “To the psychologist, then, the minds he studies are objects, in a world of other objects. Even when he introspectively analyses his own mind, and tells what he finds there, he talks about it in an objective way” (p. 183). The purpose of the psychologist was to turn his own experience into the objective knowledge of scientific enquiry. Given that James believed psychology to be a science, and psychology's data to be thought and the content of thought, it is no wonder then that he also believed that introspection was the best scientific method by which psychologists could conduct their investigations.

Although there was to be no metaphysical inquiry in psychology, the use of introspection by philosophers for that very purpose was called up by James to support his argument for its requirement as a psychological method. Citing Locke, Hume, Reid, Hartley, the Mills, Stewart, Brown and Bain to show just how established the method was in “English empirical psychology” (James, 1890a, p. 188) he further added the more recent work of Brentano, Ueberweg and Mohr as examples of its efficacy. To further back up his argument Mohr is quoted as follows, “The illusions of our senses, have undermined our belief in the reality of the outer world; but in the sphere of inner observation our confidence is intact, for we have never found ourselves to be in error about the reality of an act of thought or feeling. We have never been misled into thinking we were not in doubt or in anger when these conditions were really states of our consciousness” (Mohr, 1882, as cited in James, 1890a, p. 191). Although James agreed with this statement to a certain extent he, nevertheless, qualified it by stating how hard it is to discern some emotions through introspection. He understood, he said, that introspection was “difficult and fallible” (p. 191) but it was only difficult and fallible in the way that observation of any kind in psychology was difficult and fallible.

In particular, for introspection to be used correctly, he argued, like Spencer, that a distinction needed to be made between experiential and intellectual 'modes of consciousness'. Referring to JS Mill and Brentano, James contrasted the difference between the immediate "feltness" of a feeling and of the reflection on that feeling a moment later which is dependent on perception and memory. The first, the feeling, is the abstract phenomenological experience, the latter, an intellectual working out of what that experience is and what it means. For James it was only the second "mode of consciousness" (p. 189) that was of use to the psychologist. The first, available even to a baby, he said, was not the means by which psychological knowledge was going to progress. The psychologist,

must not only have his mental states in their absolute veritableness, he must report them and write about them, name them, classify and compare them and trace their relations to other things. Whilst alive they are their own property; it is only post-mortem that they become his prey. And as in the naming, classing and knowing of things in general we are notoriously fallible, why not also here? (p. 189)

He goes on to say that the rest of *The Principles of Psychology*, which includes his theory of emotion, is an illustration of the difficulty of using the method and "of discovering by direct introspection exactly what our feelings and their relations are" (p. 191). The following section will look at the way in which James was dependent on the reflection on experience in the production of a theory of emotion which was his own "psychologist's reality".

3.4.2 James's theory of emotion as "psychologist's reality"

My theory...is that the bodily changes follow directly the perception of the exciting fact, and that our feeling of the same changes as they occur IS the emotion. Common-sense says, we lose our fortune, are sorry and weep; we meet a bear, are frightened and run; we are insulted by a rival, are angry and strike. The hypothesis here to be defended says that this order of sequence is incorrect, that the one mental state is not immediately induced by the other, that the bodily manifestations must first be interposed between, and that the more rational statement is that we feel sorry because we cry, angry because we strike, afraid because we tremble, and not that we cry, strike, or tremble,

because we are sorry, angry, or fearful, as the case may be. Without the bodily states following on the perception, the latter would be purely cognitive in form, pale, colorless, destitute of emotional warmth. We might then see the bear, and judge it best to run, receive the insult and deem it right to strike, but we should not actually feel afraid or angry. (James, 1892, p. 449)

As the most debated and revisited emotion theory of all time, James's theory of emotion has made an enormous contribution to the literature on emotion in psychology (e.g. Arnold, 1960; Ellsworth, 1994; Lang, 1994; Plutchick, 1980; Strongman, 2003; Wassmann, 2014). Its fame is not, of course, because it has been universally accepted in psychology as the definition of emotion, but because it very quickly became a point of reference for theorists to use in their own work. As Wassmann argues, "James is cited today as if "James's theory of emotion" were a contemporary scientific text that correctly explained the emotions. "James" has become a landmark that stands for "emotion" like "Darwin" stands for "evolution." (p. 180). As Titchener (1914a) argued at the time, and others have done subsequently (e.g. Richardson, 2006; Wassmann, 2014), its fame was in large part due to James's extraordinary ability to communicate in writing and to present his work in an accessible style. Titchener argued that similar theories had been presented by many theorists before James and, more recently, Dixon (2003) that similar theories had been proposed by some of his contemporaries but were largely ignored. It was, however, James's formulation, coupled with Lange's version and sometimes, later, also with that of Sergi²¹, that received an immense amount of attention in psychology.

It was also, however, at James's theory that a great deal of criticism was directed from his contemporaries. As Dixon (2003) describes, most of the dissatisfaction was directed towards the logic of the theory, although some, like Gurney (1884), Worcester (1893), and Irons (1894), argued that the theory did not really describe the *experience* of emotion. This latter point is important. As has been mentioned, James himself did not study the brain or the body experimentally. Although he cited experiments by

²¹ Although the theory is more often referred to as the James-Lange Theory, several theorists refer to it as the James-Lange-Sergi theory (e.g. Ruckmick, 1936; Panskepp, 1986). Giuseppe Sergi (1841-1936) was an Italian anthropologist who published details of a theory of emotion in the nineteenth century similar to that of James and Lange (Sergi, 1854; Sergi 1894).

physiological psychologists and the observations of psychiatrists in order to back up his claims, the only method by which he directly observed emotion was by that of introspection. Therefore, his theory was not produced through simply weighing up the evidence from observations of the outward accompaniments to emotion as evidenced in animals and other people; it was mainly the product of inner reflection on his own experience of emotion. As has been shown, James did not differentiate between the objective and subjective, as Spencer did, but rather, argued that introspection was an objective method, a reflection on the object of the psychologist's own experiences, producing the "psychologist's reality". This section will argue that although James's theory was presented, and treated, by psychologists, at the time, and still is today, as one which could explain how emotion *functioned*, underlying James's argument was the idea of emotion as it was *experienced*. The extent to which introspection shaped James's theory will be examined by looking at how he argued for the veracity of the theory by appealing both to his own experience and to the experience of others.

Introspection, as has been described, was James's method; the way in which he observed the data of psychology which he understood as being consciousness and the mental states. As far as the emotions were concerned, however, he concluded that there were special difficulties in producing an accurate introspective account,

However, it may be with such strong feelings as doubt or anger, about weaker feelings, and about the relations to each other of all feelings, we find ourselves in continual error and uncertainty so soon as we are called on to name and class, and not merely to feel. Who can be sure of the exact order of his feelings when they are excessively rapid?...Who can compare with precision the quantities of disparate feelings even where the feelings are very much alike?...Who can enumerate all the distinct ingredients of such a complicated feeling as anger? (James, 1892, p. 191)

These phenomenological peculiarities - the variability in strength and number and the indistinctiveness - were particular to the feelings. Further, when these were reflected upon they would disappear or lose their strength. To capture enough of a sense of what feelings felt like to produce a theory of emotion was never going to be easy. However, James (1884) was clear as to the source of his theory in the article in *Mind* in which it was first presented. He claimed that his theory grew out of "fragmentary introspective observations" (p. 189). These difficulties of discrimination were not a

barrier to his analysis because he believed that it was necessary for the inner experience of emotion to be the place where a truthful account of emotion could be discovered. Certainly, Titchener's take on the popularity of James's theory is that it appealed first and foremost to experience. He says, "The accounts of emotion in psychological textbooks had become too academic, too conventionalised, and James brought us back to the crude and the raw of actual experience" (1915, p. 478). In arguing for the need for a theory of emotion, James had described the tediousness of the accounts of the emotions by the physiological psychologists. Comparing the dryness of these accounts with those produced in literature and philosophy he described the way in which these latter sources show how emotion feels, rather than simply detachedly enumerate its characteristics,

But unfortunately there is little psychological writing about the emotions which is not merely descriptive. As emotions are described in novels, they interest us, for we are made to share them. We have grown acquainted with the concrete objects and emergencies which call them forth, and any knowing touch of introspection which may grace the page meets with a quick and feeling response. Confessedly literary works of aphoristic philosophy also flash lights into our emotional life, and give us a fitful delight. But as far as "scientific psychology" of the emotions goes, I may have been surfeited by too much reading of classic works on the subject, but I should as lief read verbal descriptions of the shapes of the rocks on a New Hampshire farm as toil through them again. (1892, p. 448)

It was vital to James that psychological accounts of emotion did not become too detached from the experience they were attempting to explain and so he appealed to the experience of emotion of his readers in arguing for his theory. He appealed to experience first, in providing evidence for his theory and he did so secondly, in defence of the theory.

First, in attempting to show that his theory was an accurate representation of emotion James asked that people reflect on their own experience of emotion. He appealed to the way in which physiological changes felt, "every one of the bodily changes, whatsoever it be, is felt, acutely or obscurely, the moment it occurs. If the reader has never paid attention to this matter, he will be both interested and astonished to learn how many different local bodily feelings he can detect in himself as characteristic of his various emotional moods" (1892, p. 450). He also presented what one of his

contemporaries described as an “introspective experiment” as evidence for the theory. If people examined their own consciousness, James argued, they might see that his theory provided an account of emotion which described how it was really *felt*,

If we fancy some strong emotion and try to subtract from our consciousness of it all the feelings of its characteristic bodily symptoms, we find we have nothing left behind, no “mind-stuff”²² out of which the emotion can be constituted and that a cold and intellectual perception is all that remains. It is true that although most people, when asked, say that their perception verifies this statement, some persist in saying theirs does not. (1884, p. 193)

This thought experiment shows that James did not simply intend the theory to appeal to logic or to present an academic theory which went against the usual way of understanding emotion. He was also looking to show that this too was the way in which emotion was experienced. In doing so he, rather ironically, acknowledged the difficulty of disproving the theory experimentally, saying,

But to detect with certainty such purely spiritual qualities of feeling would obviously be a task beyond human power. We have, as Professor Lange says, absolutely no immediate criterion by which to distinguish between spiritual and corporeal feelings; and, I may add, the more we sharpen our introspection, the more *localized* all our qualities of feeling become...and the more difficult the discrimination consequently grows. (1892, p. 455)

Really what James is pointing out in this statement is that introspection does not discriminate between the feelings produced by the body, the “corporeal feelings”, and the “spiritual feelings”, those related to the hypothetical “mind-stuff”; that the physical and mental experiences of emotion were the same and not distinct.

Introspection was not capable of detecting the differences that some theorists claimed existed. But for James, the method could not be at fault. If an argument was not evidenced by introspection, then it was an indication that it was incorrect. In his paper, *The Physical Basis of Emotion*, written to defend the theory, he argued that, if introspective and physiological evidence contradicted each other, it should be the physiological evidence that should be rejected as incorrect. He stated, “Of course one

²²James (1890a) devoted a whole chapter in the first volume of *The Principles of Psychology* to showing that “mind-stuff” (the elements of which consciousness was made up) did not exist. (pp. 145-182)

must admit that any account of the physiology of emotion that should be inconsistent with the possibility of this strong contrast within consciousness would thereby stand condemned” (1894, p. 521).

Secondly, he appealed to experience as he defended the theory against its critics. For example, in replying to Irons's (1894) arguments against the theory, he stated that,

Irons, for example, says that it belongs to a psychology in which feeling can have no place...In my own mind the theory has no philosophic implications whatever of a general sort. It assumes...that there must be a process of some sort in the nerve-centres for emotion, and it simply defines that process to consist of afferent currents. It does this on no general theoretic grounds, but because of the introspective appearances exclusively.' (1894, p. 522)

Similarly, he claimed that the theory was based on his own experience of emotion which he understood as being purely a mixture of bodily sensations and judgments of these. “*Such organic sensations being also presumably due to incoming currents, the result is that the whole of my consciousness (whatever its inner contrasts be) seems to me to be outwardly mediated by these.* This is the length and breadth of my 'theory'” (p. 524).

Further, he argued that differences in understanding of emotion between theorists may come about because of the way in which emotions are experienced differently by them. There can be, James claimed, a difference between people in their ability to locate different elements of “organic excitement” when in an emotional state: “I for one shall never deny that individuals may greatly differ in their ability to localize the various elements of their organic excitement when under emotion. I am even willing to admit that the primary *Gefühlston*²³ may vary enormously in distinctness in different men” (p. 524). As far as he was concerned, his own feelings were “very mild and...platonic affairs. I allow them to hypothetically exist, however, in the form of the 'subtler' emotions” (p. 524). His argument as to differences between his own experience of emotion and that of other theorists is illustrated by an interesting exchange between James and W.L. Worcester, who had written against James's theory in *The Monist*.

²³ 'Gefühlston' refers to the 'feeling tone', or experience, of an emotion (Chang, 2009)

Worcester (1893) had argued that according to his own introspection, James's formulation was not correct. He stated,

I should have no hesitation in saying that such a statement of the case is contradicted by my own consciousness, but as that would merely be setting up my consciousness against his, without the possibility of an umpire, I will call attention to some other considerations which seem to me to render it impossible. (p. 288)

James (1894) wondered, therefore, given the differences in experience, if the introspection of critics such as Worcester "acquaints them with a part of the emotional excitement which is psycho-physically impossible that incoming currents could cause" (p. 524). It also appeared to James that much of the disagreement surrounding the theory is simply a case of theorists having idiosyncratic conceptualisations of the term *emotion*; so that theoretical differences between psychologists are rather differences as to which phenomenological experience they understand the term as referring to,

For which sort of feeling is the *word* 'emotion' the more proper name—for the organic feeling which gives the rank character of commotion to the excitement, or for that more primary pleasure or displeasure in the object, or in the thought of it, to which commotion and excitement do not belong? (p. 525)

Thus, for James the most important means by which to understand emotion was through the psychologist's own experience. As Margaret Washburn (1922, p. 106) was later to remark in defence of the method of introspection when it was coming under attack in the early twentieth century by the behaviorists, "that bulwark of behaviorism, the James-Lange theory of emotions, makes its most convincing appeals always to introspective evidence". This statement is an indication of how vital the method had been to this most enduring of psychological theories. For James, that experiences differed between theorists was not a barrier to understanding emotion but showed the rich diversity between people in terms of how emotion was experienced and understood by each person.

3.4.3 Conclusion

This section has shown that James's theory was his own "psychologist's reality" and that it was based on his own self-reflection. James's theory was a theory of emotion which, as a product of his own introspection on his emotions, was designed to capture an experience of emotion. If it did not have universal appeal, this was not only due to the explanatory efficacy of the theory but also due to the idiosyncrasies of emotional experience. This section has also shown how the use of the introspective method placed the psychologist and his own experience at the centre of the production of understandings of emotion, rather than being a detached bystander. This had a particular effect on how emotion was described. In order to discuss this aspect of introspective psychology in more detail, the following section will show the prevalence of the use of introspection by theorists in psychology at this time and will present an overview of its effect on understandings of emotion.

3.5 Introspection and emotion in late nineteenth century psychology

Having described how introspection was regarded in the work of three of the major theorists of the late nineteenth century and how its use both reflected and influenced their understandings of emotion, it is necessary to set these descriptions in a broader context. It is important also to note, before we move on to the next chapter in which the development of other psychological methods to observe emotion will be described, that introspection underpinned most of the work that was being carried out in psychology in Britain and the US²⁴ at this time. It is important, also, to examine more generally what kinds of understandings of emotion that the method produced. This section will, therefore, take a brief look at the prevalence of the use of introspection in

²⁴ This chapter has not covered the work of the structural psychologists whose experimental form of introspection began in the mid to late 1890s. This will be dealt with separately in Chapter Five.

psychology in the late nineteenth century and at how emotion was understood as a result.

3.5.1 Introspection as *the* method of psychology

Introspection during this period was a widely accepted method in psychology. The criticisms of James's theory are indicative of this. These were not based, as might be expected, on the positivist argument that introspection produced idiosyncratic accounts of psychological phenomena and that his theory related simply to his own experience and had no objective validity. The reason that this argument was not produced by psychologists was because the method of introspection was unquestionable at the time in the minds of most theorists in the US and Great Britain. In the textbooks on psychology produced during the late nineteenth century the introspective method predominated. The best way of understanding the mental states was, according to most theorists, to view them through inner reflection. Emotion, defined as a mental state and experience, could not be observed if psychologists did not reflect inwardly and it was unthinkable to suggest otherwise. There were several arguments for this.

First, introspection gave psychologists the advantage of presenting themselves at the centre of the knowledge that they produced, and this gave their science a distinctive advantage over other sciences. As G.T. Ladd (1842-1921), Professor at Yale University and author of *Psychology, Descriptive and Explanatory*, stated, "In psychology the individual point of view and the particular method of investigation and of treatment chosen, as well as the mental characteristics of the investigator, determine the character of the results as in no other one of the sciences" (Ladd, 1894, p. vii). This relationship that the psychologist had to the material that he studied was not viewed as being too subjective. Indeed a subjective psychology as gleaned from the experience of the scientist was an important part of psychological theorising, as was described in the section on Spencer, and is described also in Bain's later editions of *The Senses* and

The Emotions and in the work of James Sully (1842-1923), another prominent British psychologist.

Further, theorists such as Stout (1860-1944), the English author of *A Manual of Psychology*, argued that all sciences relied on the experience of the scientist as the medium by which observations were processed (Stout, 1898). The beauty of scientific psychology was that, not only could it explain what an object looked like to the human eye, but it could also explain how the scientist observed and experienced the object. Psychology could examine the mental processes by which the world was perceived and understood. Therefore, it was, in the US psychologist, E.B. Titchener's words, introspection that was at the heart of truly scientific accounts, because it was the only method by which experience, which was inherent to all scientific theorising, could be observed. It was, according to Stout, also the only method that gave direct access to the inner world. "What introspection does is to supply us with a direct instead of a hypothetical knowledge of mental process. It thus forms a source of psychological material which is invaluable and unattainable by any other means" (p. 16). It was, therefore, seen as an absolutely necessary method by which to produce psychological knowledge. Sully (1892b, p. 5) stated that "To try to discover mental phenomena and their laws merely by watching the outward manifestations of others, 'thoughts, feelings and volitions would plainly be futile". And although Stout (1898), like James, admitted, that there were "alleged fallacies, obscurities and difficulties with the method", these, he argued, could be overcome if the questions it answered were broad enough. "There is", he said, 'no...obscurity...in the statement that when I have toothache I do not like it very much" (p. 16).

The need for introspection in psychology was, therefore, endorsed by the leading psychologists. If it had its inherent problems, that was not an indication that it could not be a path which could lead to some theoretical developments. Indeed, it could be argued that the existence of the wealth of understandings produced during these "Golden Years" of theorising about emotion was due in part to the breadth of individual understandings that were acquired through a method which was based on the explicit reflection on individual experience. To show the effect of the use of introspection on understandings of emotion that were produced at the time, the

following section will describe some of the general characteristics of emotion which were described by late nineteenth century theorists.

3.5.2 The introspective characteristics of emotion

Some characteristics have already been touched on in the sections above. These were not simply related to particular theorist's views but were the regular and pervasive features of emotion which appeared in psychology time and again in the work of introspective theorists. Four particular characteristics of emotion that theorists described when studying it through introspection will be discussed below. First, that emotion was defined in terms of the way in which it was experienced; second, that it was described in terms of its individual and idiosyncratic aspects as much as its universal aspects; third, that there was a difficulty in delineating the emotions; and finally, that a useful scientific concept of emotion would struggle to account for the range of human emotional experience.

First, as has been described, the *experience* of emotion was at the centre of the descriptions of emotion in the work of introspective theorists. It was believed that through describing emotion as a subjective state, of how it *felt*, that a clear understanding of what emotion was and how it functioned could be developed. This is shown in the work of all of the three theorists above but particularly in the work of Bain, where the emotions were to be described in terms of particular phenomenological attributes. This was true also for many other theorists of the time, whose depictions of emotion show a variety of descriptions of how emotion felt. Examples of these are: in terms of pleasantness and unpleasantness (e.g. Bain, 1855, 1865; Baldwin²⁵, 1893); in terms of strength or weakness (e.g. James, 1892); in terms of how intense it was or how long it lasted (e.g. Ladd, 1894); and in terms of its “affective tone” (e.g. Baldwin, 1893; Sully, 1892a). Further, the division between

²⁵James Mark Baldwin (1861-1934) was a US philosopher and psychologist who founded the psychology laboratory at Princeton.

emotions as being pleasurable or painful was one of the most prevalent aspects of the way in which emotions were described. It featured in the work of most of the main theorists but was particularly highlighted by Henry Rutgers Marshall (1852-1927), the US psychologist: “emotions are states of mind composed of elements which to a great extent are usually highly pleasurable or painful” (1894b, p. 65). Indeed, although Bain (1887) attempted to argue for “indifferent feelings”, it was argued by many that emotions which could not be classed as either were not emotions at all (Stanley, 1889).

Secondly, emotion, as observed through the medium of introspection, appeared to be to some extent idiosyncratic and individual. Although there was a scientific prerogative that emotion was to be explained in terms of its universal mechanisms and experience and that patterns and laws should be discovered, it became clear, as described above, that this was not what introspective evidence was necessarily going to reveal. It was found that, not only were there differences between theorists, as shown in the section on James, but that emotional experiences were also particular to particular people. Ladd (1894), for example, stated that, “every actual emotion or sentiment has its own characteristic complexity, intensity, bodily resonance or ideational background, as it was. These differ greatly in every individual, and in dependence upon age, sex, temperament, disposition, and stage of culture” (p. 537). Comte had used the differences of understanding produced by introspection as an argument against its use in science. At this time, however, for psychologists the differences between the emotional experiences that introspection showed were valued and viewed as being a notable characteristic of emotion, even if they could not be explained. For example, James, in describing his own experience of the fear felt during a nightmare, states, “It were much to be wished that many persons should make observations of this sort, for individual idiosyncrasy may be great” (p. 522).

Thirdly, what emerged from the introspective psychology of the nineteenth century was that separating out the emotions scientifically was no easy matter. Although taxonomies of emotion had always been produced in philosophy, when psychologists tried to classify the emotions along the lines of the classifications produced in the natural sciences, it was clear that this was going to be a much more complex task. Spencer's (1868) criticism of Bain's (1859) classification in *The Emotions*, was one example of a more general awareness in psychology that any systematic scientific

analysis was almost impossible. Citing Bain's classification explicitly as an example of it not being possible to delineate the emotions in such detail, Ladd stated, "for the purposes of classification, we are prevented in somewhat the same way as that in which we are prevented when attempting the classifications of sensations of smell" (1893, p.388). Sully (1892a), similarly, argued that,

emotions are an eminently complex and variable phenomena. Thus, what we call a feeling of joy or grief will exhibit an infinite number of shades answering to particular modes of presentative consciousness and the particular currents of feeling to which these give rise. No precise systematic arrangement can therefore be tried. (p. 83)

In contrast to the consistency of the characteristics of plants and animals, the affective tone of the emotions, he said, altered over the period in which the emotion was experienced so that they were not consistent over time or between experiences. Despite the acknowledged difficulties, however, most psychologists at the time attempted to produce classifications²⁶. Both Ladd and Sully were in agreement that some broad differences, for example, in relation to the emotions being pleasurable or painful could be made and individual descriptions of emotion were made in relation to some of the characteristics of emotion mentioned above. Ladd (1893) divided them into sensuous, aesthetic, intellectual and moral feelings. The emotions are organised by, he stated, "...the natural organic variety in the activities of the mind" (p. 389). However, it was clear that the delineation of the emotions was not going to be easy scientific endeavour. Indeed James (1890b) asserted that the production of classifications was done merely in relation to the scientific purposes of each theorist, rather being reflective of emotions as experienced by people.

Finally, if it was hard to delineate the emotions because these appeared to be too much of a whole thing, introspection also showed that it was going to be almost impossible to develop a concept of emotion as a whole from the diverse range of emotional events described in human experience. What became clear through the early use of

²⁶ A great number of classifications were produced during the period which were based on various criteria (e.g. Bain, 1855; Spencer, 1855; Mercier, 1884a, 1884b, 1885; McCosh, 1880; Ladd, 1893). These followed those taxonomies already produced in the early nineteenth century by Herbart, Reid, Hamilton and Brown, for example, as described in the appendix to the second edition of Bain's *The Emotions*.

introspection is that emotions as human experiences covered an array of different phenomena and did not fall neatly into a category from which a prototypical emotion could be formed. James, for example, applied his theory only to what he called the *coarser* emotions of fear, anger, rage and love and altered it for what he called the *subtler* emotions. Emotion, therefore, if it was to be developed into a useful scientific concept would have to be narrower and more restrictive than its usual conception and what might be commonly understood to be emotional was not necessarily what science viewed as emotional. Introspection showed that emotion, as a concept or category, could not be both defined for scientific purposes and continue to reflect the range of understanding and experience that characterised all the individual emotions. As the English psychologist, William McDougall (1910), stated in his *Introduction to Social Psychology*,

In adapting to scientific use a word from popular culture, it is inevitable that some violence should be done to common usage; and, in adopting this rigid definition of emotion, we shall have to do such violence in refusing to admit joy, sorrow, and surprise (which are often regarded, even by writers on psychology as the very types of emotions) to our list whether of simple or primary emotions or of complex emotions.' (p. 48).

This quote referred to the idea that if the experience of emotion was disregarded, and other sources of evidence were appealed to, it was possible to define emotion scientifically, albeit by altering the meaning that emotion might hold for people. This would come about through the use of other scientific methods of observation as described in the following chapter.

3.6 Conclusion

In the latter half of the nineteenth century, introspection was the main method by which emotion was studied, and it produced particular understandings of emotion. These were based on the psychologist's own experiences of emotion and, as such, presented a picture of emotion as a complex and subjective phenomenological experience. They were based on the idea that emotion was felt and understood within each person, which

was where it had to be observed if a scientific understanding was to be produced. There was an understanding that emotion was to some extent a personal and individual experience which could not be easily captured by those who existed without that experience. Bain's introspective understanding of the mind had produced a view of emotion as being the most important aspect of the mind and elevated it as a subject for inquiry in psychology and his classification, whatever its shortcomings, had made a first attempt at describing the characteristics of the object of emotion in psychology. Spencer's work provided a complex view of emotion and its connection to the other elements of the mind and, in contrast to Bain, had shown the difficulties of delineating emotions from each other. James had used introspective evidence, based on his own experience, to produce a theory of emotion and, in doing so, constructed the most fruitful definition of emotion, in terms of debate and discussion at least, that psychology has ever had. As has been described also, despite the understanding that emotion was a universal human experience, the introspective descriptions of emotion seemed to show a pattern of idiosyncrasy, rather than regularity. Emotion, therefore, presented a challenge to psychologists who believed that the purpose of science was to present knowledge as structured, regular and universal and to discover laws and patterns of cause and effect.

Introspection was, however, not the only method by which theorists attempted to understand emotion during this period. All of these theorists were advocates of the examination of the physical signs of emotion as a means to greater understanding of the emotional experience. The following chapter will describe how, during this time, psychologists increasingly began to observe the outward signs of emotion: the expressions, the actions, the visceral and glandular responses. It will look at how these observations were used to address some of the perceived fallibilities of introspection in order to move towards what was viewed as a more scientific account of emotion

CHAPTER 4

EMOTION AS DESCRIBED BY PHYSIOLOGY AND EVOLUTION 1850-1900

The previous chapter described the way in which emotion was understood by psychologists using introspection as a method. It showed that these accounts tended to differ between theorists. This chapter will describe the way in which other means by which to observe emotion began to be embraced by psychologists during this period partly in order to find a way of presenting more structured, universal understandings of emotion. Although introspection was being advocated as *the* means by which to describe psychological phenomena, and emotion continued to be predominantly viewed as a subjective experience, the development of other forms of knowledge about emotion, presented a challenge to purely experiential accounts of emotion.

4.1 Introduction

The introspective analyses of emotion conducted by the US and British psychologists of the latter half of the nineteenth century were set against a background of increasing scientific observation of human beings in other ways. At this time, the observation of emotion in the body focused mainly on two aspects. First, the observation of the outward signs that an emotion was occurring within someone: that is their facial expression and physical behaviour. Second, emotion was viewed through the observation of the physiology of the body; what Ladd (1896) described as the “bodily reactions”, the ‘organs of circulation, respiration, secretion, digestion, and involuntary movements and tensions of the muscles’ (p. 504). Although these were generally viewed by psychologists of this period as the *indirect* observation of emotion, in contrast to the *direct* observation of introspective analyses, as the century progressed their importance to the way in which emotion was defined grew. What follows in this

chapter will be an analysis of this growth, why these aspects became increasingly significant and the effect of their inclusion in psychological understandings of emotion on the value placed on introspection as a means to study emotion and of its subjective experience. This section will provide the background to the chapter by describing the academic context in which these issues arose.

The scientific study of the body and brain had been developed through the work of physiologists and anatomists some time before psychology came into being as a distinct discipline. For example, Charles Bell had published details of the differences between the sensory and motor nerves in 1811 and had described the facial expressions connected to emotion in the 1820s, as mentioned in Chapter One. For the associationists, as Flügel (1933/1964) points out, the discovery of the elemental nature of the body in terms of cells and connections between these, via the nerves, seemed to mirror their philosophy of simple ideas as being combined to form increasingly complex mental structures. This connection, Flügel argues, probably accounted for the advancement of that system of psychology during the latter half of the century. The connection is to some extent reflected in Bain's work, although the relationship between associationism and physiology was never fully developed as it became quickly clear that the link between mind and body was far more complex than at first thought. In nineteenth century Britain, physiologists such as William Carpenter (1813-1885) and Henry Maudsley (1835-1918) were studying the bodies of both animals and humans. Progress in the understanding of how the body worked gave psychologists hope that physiology could also provide a platform for an understanding of how the mind worked. Although, as will be described in this chapter, this was resisted by some theorists, both physiologists and psychologists embraced the idea that physiology was a means by which the mind could be understood. Books on physiological psychology were published both in Germany and in Britain and the US by both those, such as Carpenter, who viewed themselves as physiologists and those, such as Ladd, who viewed themselves as psychologists. As, Smith (2001) argues, "The course of modern psychology as a scientific area of activity has been bound up with its relation to physiology" (p. 225). So great, claims Smith, was the connection between the two that psychologists were forced to make an argument for psychology's existence as a discipline distinct from physiology. The following quote from Baldwin (1893),

illustrates this, although he himself fundamentally disagreed with the sentiment expressed,

The question of psychology is “Is there an order of mental facts apart from the phenomenon of the physical sciences and especially physiology?”..Psychology we are told by the materialists, is properly a branch of physiology since physiology...includes the function of the brain which is thought. Psychology thus becomes a special chapter in physiology. (p. 1)

In this context the promotion of the study of the mental states and experience through introspection, as the subject matter and method of psychology, became vital as the means by which psychology could distinguish itself from the physical sciences. The maintenance of psychology as a distinct discipline, at this time, therefore, relied on the argument that, while physiological data was useful, the mind and mental states existed apart from their neural correlates and could be studied only through introspection. Spencer (1855), for example, argued that physiology, as the objective study of the human mind, needed the understanding of the subjective states in order to produce meaningful work.

The elevation of evolutionary theory as a result of the publishing of Charles Darwin's *Origin of Species* in 1859, also, radically altered the direction which psychology was to take; of its methods of observation and the kinds of evidence it admitted. As Flügel (1933/1964) states, “From now onwards psychology was related not only to philosophy (as it had always been) and to physiology (as it had more recently become), but to the general study of life in all its varied manifestations, both animal and human” (p. 99). The application of evolution to the study of the mind, meant that psychology, in the work of some theorists, became as much about the development and function of the elements of the mind in relation to the environment as it was about understanding the experience of these elements. As will be discussed in the section on evolution below, the focus of evolutionary psychology on outward behaviour as a means to study the development of the mind meant that new methods were developed for the indirect observation of emotion. As much as psychologists often viewed these as being minor routes by which to observe emotion, the acceptance of the observation of behaviour as a means to understand the mind meant that psychology never really adhered to the argument put forward by psychologists that it was purely a discipline that had the

purpose of studying only the mind, the mental states or consciousness. US psychology in particular was influenced by evolutionary ideas and comparative methods. “By 1900”, claims Boring (1929), “the characteristics of American psychology had become well defined. It had inherited its physical body from German experimentalism, but it had got its mind from Darwin” (p. 506). Functional psychologists, such as John Dewey, James Rowland Angell and William James, still argued that the principal method of psychology was introspection. They also, however, advocated comparative methods as additional sources of knowledge. The functional and comparative psychologists of the US were not content with describing the elements of the mind, but of understanding their purpose.

In Germany a group of scientists, later to be described as the psychophysicists, were attempting to understand the sensations by looking at the effect of physical stimuli on their production. Although these theorists will not be discussed in this thesis because they had little to say about emotion, it is important to note their effect on the development of psychology as a science. The work of Hermann von Helmholtz, Gustav Fechner and Ernst Weber, argues Brennan (1998), in hindsight acted as a bridge between the study of physiological and physical aspects of sensation and the emergence of an experimental, rather than a metaphysical psychology. Their interests lay, however, not only in the workings of the body but also in the subjective experience of sensing and perceiving the world and elements in it.

Although, as has been described, there was to a large extent an adherence in psychology to introspection during this period, as this chapter will show, psychologists of the late nineteenth century were open to other means by which to understand emotion whilst adhering to the idea of emotion as a mental state or experience. It will argue that as psychologists increasingly relied on other methods to observe the accompaniments to emotion, there was an inevitable movement *away* from the idea of emotion as purely a mental state and understandings of emotion became broader and more inclusive. This chapter will, therefore, proceed as follows: first, it will describe the particular reasons why physiological understandings of emotion were appealed to by psychologists and how these altered the available definitions of emotion and then it will examine the ways in which emotion became increasingly understood in psychology in terms of the observation of outward behaviour as a consequence of the

acceptance of evolutionary ideas. It will show that the consequence of this was that, rather than clarifying what emotion was, there was a proliferation of the ways in which emotion was viewed and interpreted.

4.2 Physiology of emotion

This section looks at the relationship between physiology and psychology during this period. It will first describe the arguments that were put forward by psychologists for physiological accounts of emotion to be used to supplement the scientific deficiencies of introspective accounts. It will then go on to describe three particular ways in which these were used to do so – to demonstrate that emotion was universal, to present it as a coherent concept, and in order to measure it.

4.2.1 Physiology required to supplement introspection

If emotion was to be understood subjectively, through introspection, as has been described above, it had always been argued that the physical and outward signs could aid the psychologist's understanding of it as a mental state or, indeed, a private experience. However, these signs were to be used in psychology to supplement understanding but were not the emotion itself. Indeed, as has been described in the work of Bain, most theorists could not ignore what was viewed as the obvious relationship between the mind and the body and felt that studying one exclusively would not enable the scientific understanding of the mental states to progress. "Although Subject and Object (Mind and Matter) are the most diametrically opposed facts of our experience, yet there is a concomitance or a connexion between mind and a material organism", argued Bain (1855, p. 10). One of the aims of the work of the theorists mentioned in Chapter Three was to understand the relationship between mind and matter; at how the ephemeral, intangible mental states, consciousness, thought,

feeling, emotion and memory, for example, could be produced by the physical, corporeal flesh of the body. It was not only psychologists who had this purpose, but physiologists also as mentioned in the introduction above. William Carpenter, for example, argued that an understanding of the mental was required as a reference point for the physical and vice versa: “the Mind”, he said, “has been studied by Metaphysicians altogether without reference to its material instrument while the Brain has been dissected by Anatomists and analyzed by Chemists, as if they expected to map-out the course of Thought, or to weigh or to measure the intensity of Emotion” (Carpenter, 1875, p. 2).

Those who felt no shame in being tagged materialists, such as Maudsley (1876), however, argued for the examination of the brain as the primary means to understand the mind. Arguing against introspection as the predominant method, he said of psychology, “Its value as an independent science must plainly rest upon the trustworthiness and the sufficiency and competence of consciousness as a witness of that which takes place in the mind. Is the foundation really secure? It may well be doubted” (p. 16). His main arguments against the method rested, *not* on the difficulty of the observation of contents of the mind, after all profound difficulties inflicted all modes of scientific observation. It was rather that, when contradictions between theorists' accounts arose, there was no way of adjudicating as to which was right or which was wrong. Further, he asserted that introspection produced artificial data in that it was a derailing of the usual way in which thought flowed. The workings of the brain that produced the mental states, he argued, could never be known through introspection because these were unconscious: “This activity”, Maudsley claimed, “is even of more consequence in determining the tone of feeling, or of our disposition, and the character of our impulses, than that which follows impressions received from the external world” (p. 35). Metaphysical theories of mind, being vague and false, should be ignored. It was only when a theory of mind had been developed, based on the systematic observation of the brain and body that the experiences described in introspection could be of any use. Although psychologists did not agree with Maudsley's position, Bain (1899) admitted to some disagreement within their ranks as to the extent of the usefulness of objective accounts in relation to the understanding of subjective accounts and the ratio of each that should be used in psychology.

Whatever the ratio, as psychology attempted to mould itself along the lines of the other sciences it was increasingly to observations of the physical that psychologists looked. As has been described, Bain's "systematic exposition of the human mind" was one of the first attempts at elucidating the mind in a thorough and methodical manner. Systematisation was a route by which psychology could be brought into line with the way in which other sciences, such as chemistry and biology were constructed. The descriptions of the elements of the mind, the classification of the senses and the emotions, the development of the simple elements to the more complex elements were the bases on which the scientific exploration of the mind could be founded. For some psychologists, however, as vital as it was to the description of the psychological states, the method of introspection in psychology had done little to advance an understanding of the mind in a systematic and coherent way. A review of the discipline and its output throughout the nineteenth century caused Ladd (1896) to make the following assessment,

For a long-time the so-called "old psychology" as pursued by the introspective and metaphysical methods, made little or no advance. In a single generation, as pursued by the experimental and physiological methods, the science of psychology has been largely reconstructed. (p. 9)

Physiology seemed to promise a more clearly defined basis on which to produce and progress a systematic delineation of the mind. Physiologists could begin by looking at the small elements of the body, the cells, and describe how these together made up the organs. They could show how the nerves and organs worked to produce different responses in a piecemeal way because of the relative ease of defining which bit was which. They could describe the blood, the viscera, the motor and sense nerves and how these were connected to the brain. The body, during the late nineteenth century, was gradually being mapped out, its territory discovered and described. The study of the mind through introspection on the other hand was producing, as Comte had argued it would, results that seemed, in comparison, inconsistent and indefinite. Psychologists thus were increasingly turning to physiology as a means to provide evidence for their theories and the driving force behind the use of physiological accounts by psychologists was the requirement to be seen to be acting within the

bounds of the rules of science. For this, physiological accounts were required to, in John Dewey's words, "supplement the deficiencies of introspection" (1891, p. 10).

But there were dissenting voices. Some theorists, such as John Alexander Stewart (1846-1933), the Scottish philosopher and professor at Oxford, fought the drive to include physiological evidence as part of psychological knowledge. He argued that the purpose of psychology was still, as it had always been, to study the mind and that introducing physiological accounts, however useful, radically altered the purpose and subject-matter of the discipline,

No student of Locke and Hume can read the psychological works of the present day without feeling anxiety for the future of the study of Mind or Experience. The modern psychologist is profoundly dissatisfied with his subject; the exact and the classificatory sciences, by the brilliance of their methods and results, fill him with envy; he is painfully conscious that mental phenomena are not definite enough to be the objects of a science; he must therefore connect them with other phenomena which are. Hence the "Physiological Psychology" of our day. But surely this is not psychology, or the study of experience, but physiology. Let us keep clearly before our minds that psychology is the study of experience, and inquire whether it has the marks of a Science or of a Method-whether it is a speculative, or a practical study. (Stewart, 1876, p. 445)

Stewart was far from impressed with what he saw as the denigration of introspection in favour of objective methods,

Psychologists more and more impressed by the impossibility of giving an exact scientific account of subjective states and their mutual relations, are turning their attention from these states to their physiological accompaniments, in the hope of thus constructing a scientific psychology. Because there can be no science of subjective experience, they show a tendency to ignore it, and to stamp introspection, as compared with physiology, as a waste of time. (1876, p. 447)

However, voices such as Stewart's were not listened to. Even if it was not clear what the relationship of mind to matter was, many psychologists viewed physiology as the science on which the understanding of the mind in psychology could progress, as Ladd's quote above describes. The argument as to the connection between the mental and the physical had been won in psychology, and physiological evidence was viewed as necessary, even if introspective evidence was still recognized as the means by which psychological phenomena could be directly accessed. The following section will

describe three ways in which psychology drew increasingly on physiology to supplement the perceived scientific defects of introspective descriptions of emotion: it could more easily provide a conceptualisation of emotion as a whole; it could be used to measure emotion, and it could present clearer evidence of the universality of emotion. It will describe, however, that this hope of a more structured physiological account of emotion was not fulfilled.

4.2.2 The use of physiological descriptions of emotion

4.2.2.1 The conceptualisation of emotion

Some psychologists viewed the observations of the physiologists as being capable of producing some concrete detail on which to develop the understanding of emotion in a way in which introspection could not. That there were observable changes in the body when an emotion was understood to be occurring, allowed data to be collected which might indicate something about the experience of the emotion itself. As has been described, the conceptualisation of emotion through introspection was proving difficult, given that the experience of emotion and the different emotions seemed to have different meanings and variability between people. Emotions as examined introspectively appeared to be so many different things that a coherent understanding seemed very far away from being realised. Physiology promised a presentation of emotion, not simply as a collection of similar but vague psychological events, but as a coherent whole, and that a prototype of emotion could be built which would incorporate the observable elements of emotion.

Eitler (2014) argues that, in the mid nineteenth century, German physiology, “became...a key source for the knowledge of feelings...increasingly displacing philosophy as the medium of contemporary interpretation. No other science seemed to provide such apparently certain knowledge about the human and animal body as this self-claimed rigorously scientific...discipline” (p. 100). The belief that physiologists had in their grasp the ability to provide an explanatory framework for emotion was hard for psychologists to resist, stuck as they were with a method that

flouted the rules of Comte's positivist science and seemed to provide only vague and contradictory descriptions. Although Bain (1855) argued for emotion as a mental state, it was his inclusion of physiology that allowed him to present emotion as a coherent concept. He described the physiological action associated with emotion as, 'a *diffusive action* over the system, through the medium of the cerebral hemispheres.' (p. 5). He went on, "observation shows that all parts of the moving system are liable to be affected by an emotional wave: while a very important series of effects is produced upon the secreting and excreting apparatus of the body" (p.5). In the second edition, Bain describes the involved parts of the body individually, "the stomach, lungs, heart, kidneys, skin" (p. 4) and in the third, to supply detail about the parts of the body, effects on the blood vessels and heart and descriptions of the effect of the motor nerves on the movements of the face and body. Thus, the concept of emotion, as described in physiology, became more concrete and detailed. In contrast, the accompanying introspective analyses seemed to produce fewer definite descriptions. At the end of the nineteenth century, Ladd (1894) had felt confident enough to provide, "a description of the physiological conditions of *any* developed state of decided emotional character" (p. 544),

This large amount of centrally initiated nerve-commotion itself overflows and passes down the nerve-tracts which connect the brain, centrifugally, with the internal and external organs of the body. These organs are thus put into a changed condition of tension or relation (as in the case of the muscles), of quickened or slower activity (as in the case of the heart, the lungs, the vessels of venous and arterial circulation, the secretory vessels etc.), of temperature, and of various obscure and ill-localizable form of sensuous irritation. (p. 544)

These physical descriptions of emotion also provided a basis on which to develop psychological theories of emotion. James's theory, for example, was a description of his introspective experience of emotion but drew on understandings of these physiological 'organic reverberations' as he called them as a means to understand that experience. James theory was, of course, twinned with that of Lange, a physiological psychologist, who had produced a theory similar to James's one in relation to his observation of the vasomotor responses. Lange's version of the 'feeling theory' was as follows,

It is the vasomotor system that we have to thank for the whole emotional aspect of our mental life, for our joys and sorrows, our hours of happiness and misery. If the objects that affect our senses had not the power to throw this system into action, we should travel through life indifferent and dispassionate; the impressions from the outside world would enrich our experience, would increase our knowledge, but that is all; they would neither rouse us to joy nor goad us to anger, neither bow us in care nor overwhelm us with terror. (Lange as cited in Titchener, 1910, p. 475)

Given that psychologists were coming to depend for their conceptualisation of emotion on physiological, rather than only psychological, understandings of emotion, it is no wonder that the psychological theories of the time, such as James's, reflected these. However, there were, of course, arguments against physiological conceptualisations of emotion, particularly by psychologists who were afraid that explanations of the mind were being reduced to the workings of the body. It was argued, by those against a materialist agenda, that the emotions were far more complex than the physiological accompaniments could show (Dixon, 2003). Defending a more rounded view of emotion, James McCosh (1811-1894), for example, was prompted to write *The Emotions*, presenting a theory of emotion²⁷ which gave the experience of emotion a prominent place. McCosh, a philosopher from the Scottish School of Common Sense and President of Princeton University, argued for a theory of emotion with four different aspects: the appetite, or motive; the idea; the conscious feeling; and the organic, or bodily, affection. McCosh (1880) argued that because emotion was difficult to pin down introspectively psychologists were ignoring three of the elements and moving towards treating emotions purely according to the last. He stated, 'The vagueness of the idea entertained favors the tendency on the part of the prevailing physiological psychology of the day to resolve all feeling, and our very emotions, into nervous action and thus gain an important province of our nature to materialism.' (p. iv). He felt that physiological accompaniments to emotion were too often presented

²⁷ Ruckmick (1934) argues that aspects of McCosh's theory were similar to James's but seemed to have been ignored by James, who, Ruckmick claims must have known about his theory. He argues,

A man in this position, writing a rather lengthy and significant book on the emotions in the year 1880, could hardly have been overlooked by a fellow psychologist at Harvard. That he was known to James goes without saying in as much as his name occurs in the *Principles of Psychology*. It is surprising, too, that Titchener's historical review fails to mention this contribution to the James-Lange doctrine. (p. 508)

as being automatic, reflex reactions. McCosh (1877) stated, “Emotion is not as it has often been represented by physiologists a mere nervous reaction from an external stimulus, like the kick which the frog gives when it is kicked. It begins with a mental act and is essentially an operation of the mind” (p. 415).

Although an assumed connection between the physical and the mental continued to inform psychological understandings of the mental states, physiological descriptions did not serve the purpose that Bain and others had hoped they would: that of showing how the mental states and experience of emotion arose. Further, while physiology promised the greater elucidation of emotion, some theorists found that physiological aspects of emotion were not necessarily more readily observed or provided more clarity than subjective ones. Indeed, they seemed to support the notion of emotion as being as vague and variable as described through introspection. In his *Elements of Physiological Psychology*, Ladd (1897) stated that,

The psychology of the feelings, as studied from the introspective point of view, has therefore always been peculiarly unproductive of assured results. The fact that their physiological conditions are laid so largely in obscure, rapid, and infinitely varied changes within the central organs, such as cannot be either directly observed or indirectly subjected to experimentation, increases the difficulties of the subject. (p. 498)

Despite this lack of clearness, it was the physiological accompaniments to emotion that were often used in the work of psychologists as a means to provide an ever more detailed conceptualisation of emotion. Although the subject matter of psychology was often argued to be about the examination of the mind and the mental states, the perceived close connection with the bodily states meant that finding the line of demarcation between the two both in introspection and in physiology proved difficult. Thus, even though the study of physiological descriptions of emotion was used as a means to support its understanding as an experience or mental state, in reality descriptions of the physical states started to invade and in some cases, replace, its conceptualisation as a subjective experience or mental state. Although physiological accounts were often described as indirect measures of both the changes taking place in the body and even more so of emotion as a mental state or subjective experience, they seemed to promise a more scientific account of emotion. This led psychologists

to increasingly draw on them as the nineteenth century progressed. They continued to be used as a means to discover the regularities of emotion, despite the findings that emotion appeared as variable and idiosyncratic when studied physiologically as it did when studied introspectively.

4.2.2.2 The measurement of emotion

Towards the end of the nineteenth century psychologists were increasingly striving not simply to observe and describe but to measure and also quantify. The push for this in psychology came from two sources. First, from the example set by the natural sciences and second, from the increase in sociological accounts of human behaviour as developed in the work of Darwin's cousin Francis Galton (1822-1911). The production of quantitative data and the development of statistical techniques, in particular, in these fields, seemed to provide a template by which psychology could progress as a science. In the third edition of *The Emotions*, Bain (1875) argued that, "The inability to estimate quantity with precision is a serious defect in any department of knowledge; it is the absence of the feature constituting an *exact* science. (p. 23). Further, Baldwin (1891), bemoaning the difficulty of measurement in psychology, stated that, "*mental facts, unlike physical facts, cannot be directly measured*. For the measurement of external magnitudes extension affords us at once definite and constant standards; but for states of consciousness we have no such exact means of procedure" (p.3). The mental states were unfortunately, "liable to all the uncertainties of subjective estimation" (Baldwin, 1893, p. 3). Bain lamented the inaccuracy of language used in introspective psychological descriptions and argued for quantification of emotion as a means by which to produce some statistics about it. According to Bain, there was no reason why introspection should not be useful for this purpose. For example, it could be used to measure the strength of emotions, "From the zero of indifference, up to the highest known pitch...no one would venture to interpolate twenty graduations, perhaps, eight or ten" (1899, p. 27). Likewise, time could be used as a measure of emotional intensity; the more intense the emotion, the longer it would be seen to last and, further, the occurrence of particular emotions could be counted and might be observed to occur more frequently. Bain also argued that, outwardly, emotions could be viewed in terms

of their facial expression, the regularity of which could be measured and also by how much physical energy and intensity they appeared to produce. It could also be detailed as to how often people engaged in a particular activity so as to gauge what kinds of feelings, unpleasant or pleasant, these actions of might be producing. For example, if someone often went on holiday to Switzerland it was a sign that for that person this was something that produced within him pleasant emotions. The counting of the occurrences of these actions could act as an indirect guide to what people were feeling.

British and US introspective psychologists struggled to find definite sources for the measurement of emotion. The measurement of emotion in the physiological laboratories of Leipzig in contrast appeared very impressive. By the end of the nineteenth century, William Wundt and his German contemporaries were producing all kinds of physiological measures of feeling. Ladd and Woodworth (1911) discuss the different ways in which the bodily accompaniments to feeling were measured: the use of pneumographs to measure breathing and movements in the chest; the rate and depth of respiration; the use of sphygmographs to measure the pulse and plethysmographs to measure the pumping of the blood. Add to these, the kymograph, developed by Carl Ludwig in the 1840s, to measure blood pressure and the galvanometer to study electrical impulses from the body, and it was clear that physiology had at its disposal an array of impressive sounding instruments which could potentially produce a range of measurements of physical emotional response. Ladd reported, for example, the work of Otto Veraguth (1870-1944), the Swiss neurologist, where the needle of the galvanometer reacted most strongly when a particularly emotional passage was read out to a participant. He reported Wundt's experiments, too, where pulse and breathing were measured while a subject was shown particular pictures. If measurement in psychology was to be the key to understanding the emotions scientifically it seemed that physiologists had made a great deal of progress. When contrasted with the vagueness of introspection, these measurements promised a more concrete basis on which to define emotion.

The development of experimental psychology around the use of these instruments in German labs impressed US and British psychologists because they enabled the experimenter to control and isolate particular psychological and physical states. The production of these kinds of data seemed to equal scientific progress. The increasing

argument that psychology must construct rigid structures of measurement and experimentation in order that a systematic psychology be advanced meant that the ideas of introspective analyses conducted by a solitary psychologist seemed increasingly anachronistic and merely the metaphysical musings of individual and unrepresentative minds rather than as a scientific method as such. Further, as will be described below, another requirement of science was also devaluing the British and US focus on emotion as experience. The requirement that scientific psychological knowledge be universally applicable meant that the focus was on looking for the commonalities in emotion rather than its idiosyncrasies.

4.2.2.3 Emotion as a universal phenomenon

The issue of the scientific assumption of universality also caused the study of emotion in psychology through introspection to be problematic. In this context, introspection appeared again to be somewhat inadequate at getting to the heart of what really seemed to matter to science. In the final edition of *The Emotions*, Bain (1899) stated, “We must use our single and solitary mind as a key to the whole human race...this must be pronounced a narrow basis for interpretation for such a vast range on individuation” (p. 26). He also argued, however, that it was certainly easier for psychologists to observe emotion through introspection because the inner world of other people was not available to them. The only access to other people's emotions that psychologists had was indirect, through self-report and through observation of the outward accompaniments. For Bain, emotion was narrowly defined as simply a mental state, but there were inherent problems of how to study it. He stated, “while the signs of feeling [in other people] may be sufficiently distinct, we never have access to the thing signified” (p. 25). He was pragmatic about the difficulties of 'getting at' the mental states or the feelings through the observation of the physical states: “Our own experience tells us that the same outward expression does not always mean the same inward state even in ourselves” (p. 26).

Physiology, on the other hand, could potentially provide a level of universality on which an understanding of emotion could be built even if the experience of emotion was perhaps somewhat idiosyncratic and individual. Bodies and brains tended to look

and act much the same even if there were differences in size of the organs or brains or idiosyncrasies of function e.g. blood pressure and heart rate. Physiology could also provide clues as to why people were the same and why they were different. It seemed to present a picture of a general uniformity between bodies, whereas, the workings of the mind seemed much more susceptible to change over time and between people. Indeed, physiology had already shown that it could produce universal laws or patterns with regard to the way in which the body acted. For example, as early as 1811 Bell had described the location of the motor nerves in the spinal cord and eleven years later François Magendie, the location of the sensory nerves, in what was to become the Bell-Magendie Law. Further, Carpenter (1875) stated with regard to the “habits of Nervomuscular action”, that it was a “matter of universal experience, that such habits are far more readily acquired during the period of Infancy” (p. 75). Physiologists were describing consistent patterns of form and function of the body. Mental and experiential laws and patterns of emotion in psychology had so far been notoriously difficult to pin down and therefore the production of universal laws with regard to the workings of the body promised that from these physical laws, mental ones could be more easily developed.

4.2.3 Conclusion

This section has described the ways in which physiology was used to supplement introspection and satisfy the assumptions of a scientific discipline, namely that the knowledge that it produces is measurable, verifiable and replicable. While physiology could not study the subjective experience of emotion directly and certainly when used seemed often to continue to present emotion as idiosyncratic and individual, it offered the possibility that emotion could be measured, conceptualised and presented as a universal phenomenon. In accepting physiological understandings of emotion, however, psychologists began to embrace other definitions of emotion rather than purely that of emotion as a mental state or subjective experience and this was beginning to alter how emotion in psychology was conceptualised. Further, during this period, there was another framework of knowledge through which emotion was

beginning to be described and defined, also: that of evolution. It too was having a profound effect on the ways in which conceptualisations of emotion were to develop.

4.3 The evolution of emotion

The theory of evolution has had a significant and long-lasting influence on the way in which emotion has been understood in psychology. As will be described in this section, it meant a movement away from the definitions of emotions as purely subjective experiences to those which embraced a range of understandings – biological, instinctual, and behavioural, for example. This section will describe the development of these understandings of emotion and of the way in which the means by which emotion was observed altered as a result of their development. It will show that while introspection continued to be advocated by theorists who embraced these, it, and the understanding of emotion that it was used to produce, was challenged by broader observations of the phenomenon.

4.3.1 Evolution and psychology

The emotions could hardly come to their own before a very considerable convergence of modern interests had prepared the way for the consummation...(a) the *evolutionary* doctrine in general and the signal service of Darwin's study of emotional expression as a link between man and beast. (Jastrow, 1928, p. 27)

If the effect of the use of physiology in psychology was to tie the subjective states to their physical cause or accompaniments, the impact of evolution was to almost entirely remove the need for the explicit understanding of human experience in psychology altogether. The enormous influence of evolution on the development of psychology has been well-documented (e.g. Boring, 1929; Dixon, 2003; Flügel, 1969; Richards, 2010). According to Brennan (1998), “For psychology, Darwin's theory of evolution

represented the third movement of the nineteenth century...which not only allowed the formal study of psychology to emerge as a discipline, but indeed, made it unavoidable and compelling” (p. 156). The emergence of psychology as a scientific discipline, however, was happening regardless of evolution. What the introduction of the theory of evolution did, rather, was to alter significantly the subject matter and purpose with which some of the early psychologists had set out. Although Spencer was advocating an evolutionary approach even before Darwin had brought out *The Origin of Species*, other theorists were much more cautious in their acceptance. Bain (1865), found it difficult to see its relevance to the study of the mind and emotion. In the second edition of *The Emotions*, he stated,

On the subject of Fear, I mentioned a suggestion of Mr. Spencer’s derived from the doctrine of evolution; far greater in my opinion, is the light flowing from the physical workings of that passion. Those great physical generalities stated...are full of suggestions as to the mental laws. (p. 603)

Criticisms by Spencer (1868) of Bain's classification of the emotions as being “transitional” had caused the latter to rethink the use of the Natural History Method but not, at first, his views on the introduction of evolutionary ideas into psychological understandings of emotion. However, in the third edition of *The Emotions*, he considered the question of whether the emotions “gain in clearness” when “viewed in the light of this [evolutionary] hypothesis” (Bain, 1875, p. vii) and conceded that for love and anger in particular they did. As Dixon (2003) describes, despite some objections, there was a gradual and general acceptance by psychologists of an understanding of emotion in terms of adaptation, inheritance and instinct as much as experience, ideas and elements. Spencer and Darwin and later, functional psychologists, James, Dewey, Angell and McDougall and comparative psychologists, Romanes, Hall and Thorndike seamlessly incorporated the theory into psychological knowledge in a way which meant that by the end of the nineteenth century it had become the ideological basis for much of the psychological knowledge that was being produced. Indeed, as the US functionalist psychologist, James Rowland Angell (1909) stated, so accepted were Darwin's ideas in psychology, that an understanding of the extent to which he had influenced psychological knowledge in the US seemed to have been forgotten,

Darwinism has never been a really vital issue in psychology. Occasionally a theologian or a naturalist has inveighed against the Darwinian theory of mental evolution, but the psychologists as such have rarely uttered a protest. In view of the storm of vituperative scientific criticism precipitated by the publication of the *Origin of Species*, this fact is distinctly significant. Indeed, so much a matter of course have the essential Darwinian conceptions become, that one is in danger of assuming fallaciously that Darwinism has no important bearing on psychology. (p. 152)

Therefore, from the mid nineteenth century onwards, the study of psychological phenomena in psychology was connected also with an understanding of their evolutionary development. For the emotions there was a particular incentive to take an evolutionary approach to their study, as Jastrow was to reflect later, “The evolutionary renaissance was a general one. Yet the demonstration was easier that animals behave like human beings because they *feel* as human beings *feel* than that they behave so because they *think* as human beings *think*” (1928, p. 280, my italics). Because of the physical accompaniments of emotion in the form of expressions and actions which were observable, it was easier to make connections between human and animal minds through the study of emotion than through other elements of the mind that could not be outwardly observed. Conversely, given that introspection did not seem to be producing a great deal of scientific progress in their understanding, connecting animal and human emotions gave psychologists another route into their study even if, as Bain had argued time and again, there were inherent difficulties associated with making assumptions about the emotions of another person, never mind an animal. The making of this connection also gave encouragement to physiological psychologists that the study of animal physiology would be useful in developing an understanding of the human body and mind.

Although introspective accounts were still seen to be important by many psychologists including those who were taking a functionalist approach, in a theoretical culture which prized evolutionary understandings there was less room for experiential interpretations to flourish, as will be illustrated in this chapter. Indeed by the early twentieth century, there was a tendency for the former to be viewed as being more valuable. As Angell (1909) stated,

The analytical methods will no doubt always retain a certain field of usefulness, and an indispensable one at that, but our larger and more significant generalizations, our more practically important forms of control over mental life are going to issue from the pursuit of methods in which growth, development and the influence of environment both social and physical, will be the cardinal factors, methods which will in other words apply Darwinian principles with, let us hope, Darwin's tireless patience. (p. 153)

Ernst Haeckel (1834-1919) the German zoologist, in discussing the effect of evolution on the subject matter and method in psychology, was even more explicit. "The future task of scientific psychology, therefore, is not as it once was, the exclusively subjective and introspective analysis of the highly developed mind of a philosopher, but the objective, comparative study of the long gradation by which man has slowly arisen through a vast series of lower animal conditions" (1905, p. 108).

The following section will describe the ways in which emotion was observed and understood as a result of the embracing of the theory of evolution by psychologists and the methods developed in response. It will be divided into three parts, each illustrating how the theory of evolution impacted on the understanding of emotion in psychology and its effect on the view of emotion as a subjective experience. The first part will describe Spencer's arguments for comparative methods to study emotion and the assumptions on which these rested; the second, the use of these methods by Darwin in the observation of emotion in his *Expression of the Emotions in Man and Animals*. The third part will examine the understanding of emotion as related to instinct in US functionalist accounts.

4.3.2 Evolution and emotion

4.3.2.1 Spencer's comparative method for the study of emotion

Although Spencer (1868) was an advocate of introspection he also argued that it was not enough for psychologists simply to study their own minds but that the study of mental evolution must take place through examining other, less well developed minds in order to produce a truly scientific and systematic account. He was, therefore, one of

the first theorists to argue for a comparative psychology as a means to study emotion. In his essay on Bain's *The Emotions*, he argued that it was not enough to use only introspection and physiology but that the emotions must also be understood in terms of their evolutionary development, particularly if they were to be successfully classified according to the Natural History Method. The understanding of the development of both “structures” and the related “functions” of the mind were, he argued, necessary to present a complete analysis. However, Spencer described the difficulty of such an analysis of the emotions,

“But”, it will perhaps be asked, “how are the emotions to be analyzed, and their modes of evolution to be ascertained? Different animals and different organs of the same animal, may readily be compared in their internal and microscopic structures, as also in their developments; but functions, and especially such functions as the emotions, do not admit of like comparisons.” (1868, p. 309)

Emotion was viewed as being a purely a mental state or subjective experience. However, the problem of studying it in other people was still a barrier to its understanding. Although Spencer understood that it may be difficult, and, therefore, any classification be “provisional”, there was much, he argued, that could be done to develop a greater understanding of the emotions with regard to evolution. The only way really to get at the emotions of other people was to study their behaviour, expressions or actions during various states of emotion. To develop an evolutionary account, however, the study of the behaviour associated with the emotions could not be confined only to psychologists themselves. They must, also, be observed as taking place within various other classes of what he termed “organisms” in order for comparisons to be made. First, this could be done through comparisons between animals: “Thus we may, in the first place, study the evolution of the emotions up through the various grades of the animal kingdom: observing which of them are earliest and exist with the lowest organisation and intelligence” (p. 310); second, by studying 'savages' and comparing their behaviour with 'civilised' people: “we may note the emotional differences between the lower and higher human races – may regard as earlier and simpler those feelings which are common to both, and later and more compound those which are characteristic of the most civilized” (p. 310); and third,

through the study of children: “we may observe the order in which the emotions unfold during the progress from infancy to maturity” (p. 310).

Although Spencer did not carry out any of these investigations into emotion himself, his theoretical and methodological stance, a stance which was taken up by psychologists throughout the late nineteenth century, reflected particular expectations about what a comparative psychology of emotion would find in contrast to the muddled view of emotion produced by introspection. As discussed in Chapter One, Spencer had found that he could not delineate the emotions introspectively in a way which would produce a complete and comprehensive analysis. Emotions seemed to him to be often, “homogenous to consciousness” (Spencer, 1868, p. 250). Thus for the understanding of emotion in an evolutionary sense, the study of the subjective states would, without the comparative methods, result in the production of an understanding of emotion which was not scientifically 'true'. “And here, indeed”, Spencer went on to argue, “in the inability of existing science to answer these questions which underlie a true psychological classification, we see how purely provisional any system of classification is likely to be” (p. 250). Therefore, although Spencer placed a great deal of value on introspection as the means to understand emotion, he argued for the use of comparative methods to study emotion *alongside* that of the study of subjective experience. This was to have an effect, even if not intended, on the value of introspective evidence in psychology.

First, the study of emotion through two of these methods - the study of animals and young children - meant that subjective experiences of emotion could never be a part of that study because these groups did not have the linguistic ability to describe their own experiences. Thus, subjective experience as an aspect of emotion was lost to the understandings of emotion produced by the comparative method. However, if experience of emotion was to be explicitly attributed to these categories, psychologists would be open to accusations of speculation and with regard to animals, anthropomorphism. Secondly, as is evident in Spencer's argument for these methods, there was an assumption that minds and the emotions were hierarchical. The hierarchies lay between physically simpler and more complex animals, babies and adults; and between civilized and uncivilized societies. Evolution fitted well with the associationist assumption of collections of simple ideas going together to make up

more complex ones. It fitted well, also, with the prevalent cultural assumption that British and US societies were more psychologically advanced (Richards, 2012). Hierarchies of emotion could not be revealed introspectively by psychologists who were all 'civilized adult men' but as observed through the outward manifestations in the range of classes mentioned. Spencer felt that 'primitive emotions' such as fear, anger and disgust may be viewed in animals and in the 'lower races', but presumed that some emotions, the 'aesthetic' and 'moral' emotions, were only experienced in the so-called 'civilized' echelons of society and, therefore, would not be viewed in 'lower' groups. He, for example, stated that "There are emotions common among ourselves, that are scarcely in any degree experienced by some inferior races; as, for instance, those produced by music" (1868, p. 312). This assumption of hierarchy allowed for a systematic study of emotion in the way in which the complex, undifferentiated, idiosyncratic understandings of emotion as observed through introspection could not. As Angell, argued, the acceptance of the hierarchical understanding of minds had particular advantages for psychology,

Indeed, at the present time it is undoubtedly the case that most psychologists share Darwin's main convictions as to the continuity of mental evolution from animal to man, less perhaps as a result of careful scrutiny of the facts than as a consequence of a powerful drift from every direction toward the belief in a common origin for human and animal characteristics. We feel more comfortable nowadays in a world where simple and uniform rules obtain. (1909, p. 159)

A third, connected, consequence of evolution was the placement of people in the category of 'organism' alongside plants and animals (Danziger, 1997a). Spencer (1868), for example, in attempting to define emotion stated, "the word Emotion has come generally to mean that kind of feeling which is not a direct result of any action on the organism" (p. 319). The effect of the use of this term was to present a view of people not predominantly as experiencing, agentic human beings, but rather as passive, biological, objects of scientific observation. In turn, the experience of the human as an organism seemed of less value, indeed was increasingly seen as not to be trusted, partly because the experience of some of the other organisms in the category could never be ascertained. It presented human emotions, therefore, as adaptive, physical, mechanistic processes which had little to do with reflection or experience. This

analysis concurs with that of Dixon (2003, p.179) who also highlights the defining of emotions in the evolutionary context as ‘non-cognitive feelings’.

In this section the way in which Spencer’s understanding of how emotion should be studied in psychology had particular inevitable effects on the value placed on the subjective experience of emotion has been described. Although Spencer was an active advocate of evolutionary theory and the use of comparative methods, Darwin's more accessible descriptions of evolution in the *Origin of Species* (1859) and *The Descent of Man* (1871) caused these to become incorporated more widely into psychology in Britain and the US. The following section will examine the use of comparative methods to study expressions of emotion by Darwin in his other highly influential work, *The Expression of the Emotions in Man and Animals* ²⁸.

4.3.2.2 Darwin and the detachment of experience from expression

Darwin reduced emotions to precise and measurable quantities: heart rate, blood pressure, movements of the facial muscles, angles of the brow, developmental stages in the individual or the species. As emotions became mechanical and reproducible through new technologies, their “quality” faded, their felt experience disappeared. (White, 2009, p. 826)

Darwin's *The Expression of the Emotions in Man and Animals* is a book which has had a profound effect on the study of emotion in psychology²⁹. This section will describe the subject matter of the book and the methods of observation that it advocates. It will explain how the methods strip away the explicit relevance of experience to the understanding of emotion and will also demonstrate that the experience of emotion, as something which is not often explicitly discussed in the book, was, however, implicit in Darwin's research. Further, it will argue that Darwin presented a template for the study of emotions for psychologists to follow without the need to have recourse to the subjective experience.

²⁸ To be referred to as *The Expression* for the rest of the chapter.

²⁹ See, for example, *Darwin and facial expression: a century of research in review* (Ekman, 2006).

Although he acknowledged in the introduction to the book that expressions in humans had already been widely studied, Darwin makes it evident that his own account has been put together for a particular purpose; to show that human and animal emotional expressions, and by inference the emotions themselves, were on a continuum. In particular the book was written to address some concerns Darwin had with the work on expression of Charles Bell whose theistic stance meant that, according to Darwin, he had “evidently wished to draw as broad a distinction as possible between man and the lower animals” (1872, p. 10). Although Darwin was greatly impressed by the work of anatomists and physiologists of expression, such as Bell and the anatomist, Duchenne (1862), whose *Mécanisme de la Physionomie Humaine* was a rigorous study of the movement of the facial muscles in the production of expressions, he almost viewed their works as Spencer viewed Bain's, as ‘transitional’, because they did not provide an evolutionary account. Darwin is explicit in the introduction to *The Expression* that it would not be like previous accounts of emotional expression because it had been written expressly to show that the emotional lives of people and animals are on a continuum as demonstrated by the way in which animals expressed their emotions in a similar way to humans. Unlike some of his contemporaries Darwin did not set out to study emotion as a mental state, nor as a subjective experience. Neither was he concerned with producing a definition or theory of emotion or of classifying the emotions, although the way in which the chapters were set out meant that seemingly connected emotions are dealt with together. Darwin, of course, was not a psychologist, but rather a biologist, so whatever his own experience of emotion, it was not to be an explicit part of this work. Indeed, of course, in explicitly studying the expression, rather than the emotion itself, it would have been impossible to study his own physical movements in the way that it was possible to reflect on the inner experience.

Darwin was not a physiologist or anatomist either. Although he included some explicitly physiological descriptions, he did not set out to provide a detailed anatomical account of each expression, but rather to study the behaviour associated with the emotions in a systematic manner, using comparative methods. Although Spencer (1868) had argued theoretically for a comparative psychology, he had not gone on to develop his ideas in a practical sense or conduct any comparative research himself.

Darwin, however, had been carrying out observations on people and animals and taking notes for decades prior to the publishing of his book, and had developed several other methods for the observation of emotional expressions. First, he advocated the observation of emotion in infants because, he argued, their expressions were particularly pronounced; second, he included reports of emotional expressions of those classed as insane for the same reason. Third, Darwin studied the expressions of animals, particularly dogs, cats and the “commoner animals” (1872, p. 11). Further, he used the new technology of photography to capture fleeting emotional expressions to be analysed at leisure, following the work by Duchenne. Using Duchenne's plates, Darwin also examined how well people recognised emotional expressions in others. He did attempt, also, to observe something about the expression of emotion from some of the artworks of the great masters but concluded that the requirement of the depiction of beauty in these meant that something about true emotional expression was lost. Finally, he set out to discover if emotional expressions were universal through cross-cultural studies³⁰. In an attempt to capture information about the expressions of the “lower races”, he produced questionnaires which he sent out to missionaries and officials throughout the British Empire in order to “ascertain whether the same expressions and gestures prevail, as has often been asserted without much evidence, with all races of mankind, especially with those who have associated little with Europeans” (p. 15). Like Spencer, Darwin believed in the hierarchy of emotion – that some emotions could be observed in both people and animals, that some could only be observed in humans and that some could only be observed in the ‘civilized’ races.³¹

Darwin's subject matter and methods, therefore, were designed to present a particular understanding of emotion. Darwin was attempting to connect the emotions of people and animals and to place them in an evolutionary context. Therefore, the account of

³⁰ In 1968 Ekman, Sorensen and Friesen (1969), following Darwin, set out to similarly examine the extent to which emotional expressions are cross-cultural. The study compared participants from US, Brazil, Japan, New Guinea and Borneo, looking at their interpretations of photographs of emotional expressions. This generated the notion in psychology that there are six basic emotions – fear, anger, surprise, happiness, disgust and sadness - and has spawned a huge amount of psychological research in the area - see e.g. Ekman (1977); Ekman (1992); Ekman (2003).

³¹ This view of emotion was later influential on of the major strands of theorising on emotion in psychology, the basic emotions hypothesis (Gendron & Barrett, 2009) which present accounts of emotions in psychology as being either primary or secondary: the former being equated with emotions which are innate and physiologically hardwired and experienced across cultures and those which develop in relation to the culture of the immediate environment.

emotional expressions which he presented was, essentially, a functional one, in the sense that he was attempting to understand their purpose. He includes very little in terms of descriptions as to how particular emotions might feel or are experienced by the people or animals being observed, nor discusses how he arrived at the selection of the particular emotions tackled in the book. In his questionnaire, he does not attempt to elicit from those observed how they feel when they display the expressions and behaviours that they do. It is rather that he wished simply to understand what the expressions are and why they are displayed. The questionnaires included such questions as, “When in good spirits do the eyes sparkle, with the skin a little wrinkled round and under them, and with the mouth a little drawn back at the corners?” (p. 16) and “Is fear expressed in the same general manner as with Europeans” (p. 16). The display of emotional behaviour thus was studied as separate from the subjective experience of the person being observed. The inferences made as to what emotion they were experiencing was given through the circumstances in which it arose rather than how they felt.

The result in *The Expression* is that the subject matter and, therefore, the object of study is not the person or animal itself but, rather, the particular behaviours displayed, because it is through the observation of these behaviours, and the situations in which they arose, that, Darwin hoped, an understanding of the reason for their existence would be found. Further, because Darwin did not view animals as having volition or will, he presented an understanding of emotional behaviours as involuntary, habitual and instinctive. Indeed, the three *principles* of expression he described in the book: serviceable associated habits, antithesis and direct action of the nervous system, were attempts to theorise as to the reasons for the automatic production and function of emotional behaviours. The first refers to the idea that particular expressions were in the past habitual and have become a useless remnant of the past, the second that some expressions result because they are the opposite of the serviceable ones, and the third reflects Bain's law of diffusion or the nervous discharge of emotion. Darwin seemed to believe that emotional expressions served no communicative purpose but were merely inherited responses. He thus further dissociated them from the actual feeling of the person being observed: first, because they are viewed as an automatic and habitual response to something that happens in the environment rather than an

accompaniment to an experience and second, because they are viewed as not being of any use whatsoever. What occurs subjectively within the subject, therefore, was of little relevance other than the idea that they may be feeling something when they act.

The methods of observation also detached the emotional expression from the emotion itself. The use of photographs, particularly those of Duchenne, who had induced artificial emotional expressions in the faces of people through the use of electrical stimulation, and indeed, Darwin's attempt to study paintings allowed him only to look at the expression but not at the underlying feeling. The study of animal emotional expressions did the same because psychologists could not rely on their own feelings of emotion to describe how animals might feel. Indeed, Darwin was clear in arguing that the observation of animals was of "paramount importance" not for "deciding how far in man certain expressions are characteristic of certain states of mind" (p. 17) but for, "affording the safest basis for generalisation on the causes, or origin, of the movements of Expression" (p. 17). It also meant that there was less likelihood of the observer having preconceptions of the observed and, therefore, of being objective, "In observing animals, we are not so likely to be biased by our imagination; and we may feel safe that their expressions are not conventional" (p. 17). The observation of infants and the insane erected a further barrier between the emotional experience of the observer and the observed, as was the observation of expressions of 'savages', people who were seen as being much further down the evolutionary ladder. Because the experiences of these were regarded as being very different to the theorists own emotional experience, these could be viewed with detachment. This is pure description of the emotional expressions, viewed disinterestedly by an observer, who, to a large extent presented himself as emotionless whilst viewing the object of this study.

Of course, Darwin set out to study expression only, so it is perhaps no wonder that there is little reference to the experience of emotion in his work. However, White (2009) argues, that although Darwin used objective methods in *The Expression*, his own experience of emotion is never far away from the understanding of emotion that he puts forward. He disagrees, however, with Levine's (2006) stronger assertion that Darwin's objective self is merely a construct. White believes, rather, that in attempting a detailed scientific analysis of the emotions, Darwin's own emotions played a vital part in what develops, but that he was able to separate his objective and subjective

selves. The following statement, however, expresses the sense that it was not always easy for Darwin to remain emotionally detached and at the same time attempting to make observations: “When we witness any deep emotion, our sympathy is so strongly excited, that close observation is rendered almost impossible” (1872, p. 13). Some of Darwin's findings were produced by studying his son, so perhaps it is no wonder that he at times felt this way, and highlights the way in which Darwin's observations of emotional expression were not as entirely detached from his own experience as he may have wished.

The sense too that the animals he studied were experiencing something was prevalent in his discussion of emotions in *The Descent of Man*, where he much more explicitly described the *feelings* which animals might experience as demonstrated by how they express themselves.

This shews that animals not only love, but have desire to be loved. Animals manifestly feel emulation. They love approbation or praise; and a dog carrying a basket for his master exhibits in a high degree self-complacency or pride. There can, think, be no doubt that a dog feels shame, as distinct from fear, and something very like modesty when begging too often for food. (1871, p. 40)

There is, therefore, throughout *The Expression* an underlying sense that behind the expression there is a particular kind of feeling, even if the focus of the work is on the physical. It is often clear that it is extremely hard to do away with emotional experience entirely. This is indicated in his analysis of the descriptions he received from his questionnaires. Having collected thirty-six of these, Darwin used the descriptions from them throughout *The Expression* to delineate similarities between European and 'aboriginal' expressions. At times, the circumstance in which an expression occurs is described and from it an assumption made as to which emotion the person or animal is displaying. For example, “The expression of grief is by no means confined to the Europeans, but appears to be common to all races of mankind...With respect to the negroes, the lady who told me of Fra Angelico's picture, saw a negro towing a boat on the Nile, and as he encountered an obstruction, she observed his grief muscles in strong action, with the middle of the forehead well wrinkled” (p. 187). In order to understand what emotions the facial displays are demonstrating, Darwin, must have had to refer, however, implicitly to his own

emotional life and bring up an internal template of the feeling which was being described. In places, when distinguishing between emotions which are similar in expression it is to the state of mind that he referred. For example, “Scorn and disdain can hardly be distinguished from contempt, except that they imply a rather more angry frame of mind” (p. 254). Disgust, sneering and defiance, Darwin insisted were so similar that in terms of the expression were almost impossible to distinguish although clearly in a phenomenological sense they could be. The sense of the emotions as being individual, nuanced, personal experiences, therefore, comes through in *The Expression*, despite the rigid focus on the outward behaviours.

This *implicit* introspection was in contrast to the work of Darwin's peers in psychology and their *explicit* emphasis on the subjective analysis of their own emotions. Darwin, however, illustrated how emotion might be studied without the need for an explicit introspective agenda or even a great deal of physiological detail, but rather from the observation of human behaviour under particular circumstances. In the adoption of both his theoretical approach and methods of study, later psychologists found a means by which to bypass the difficulty of self-observation and the complex depiction of emotion it provided. Indeed, as Angell stated, through an embracing of behavioural accounts of emotion and an increasing use of the methods which Darwin developed, psychologists gradually became less reliant on their own experiences of emotion but rather on the outward displays of others as a means to construct a psychological view of what emotion was and how it functioned. As much as Bain did not readily embrace the theory of evolution, his ideas on the study of the emotions certainly developed in response to Darwin's work. Indeed, what he had viewed as being mere physical 'accompaniments' to the emotions started to become elements of emotion itself. He stated that “The Feelings possess a natural language or Expression. So constant are the appearances characterizing the different classes of emotions, that we regard them as part of the emotions themselves” (Bain, 1873, p. 6). Further, in the final edition of *The Emotions*, Bain (1899) argued that often the best way of observing emotion is to do away with thoughts of the subjective state altogether but to describe them from the outside: “every mental sequence runs side by side with a physical sequence, we may, and often do, remain content with the physical aspect, and image the phenomena to ourselves under that aspect exclusively” (p. 681), and, “In really the same exclusively

objective forms, we can study and think of, our grown-up fellow-men, we may refrain from conceiving their pleasures, pains, emotions, ideas, in the subjective character” (p. 681). This indicated a movement away from his regarding emotions as predominantly mental states to predominantly being behaviours.

4.3.2.3 US functionalist accounts of emotion as instinct

As described in the introduction, US psychologists embraced evolution and incorporated its purpose and methods into functionalist accounts of the mind and emotion. This section will show that, although they argued that introspection was the primary method in psychology, the purpose with which they set out to explain the mind meant a movement away from the use of introspective accounts of the experience of emotion but that other accounts came to dominate the field, in particular, accounts of emotion as being tied to instinct.

Darwin, in his account of the emotional expressions, argued that these were habitual, automatic responses and a remnant of the evolution of human beings. Although Charles Bell too had argued for the expressions as instincts, the introduction of evolution changed the concept of instinct from meaning something which had been placed in an animal by God, to being a behaviour which had been inherited for survival (Richards, 2002). Spencer was the first theorist to use the latter view in relation to the motivation behind emotional response. He argued, that certain emotions, were instinctual, habitual, reflex processes which take place in the body in response to particular events in the environment, for example, stating that,

When in the circumstances of any race, some one kind of action or set of actions, sensation or set of sensation, is usually followed, or accompanied by, various other sets of actions or sensations, and so entails a large mass of pleasureable or painful states of consciousness; these, by frequent repetition, become so connected together that the initial action or sensation brings the ideas of all the rest crowding into consciousness;...constituting what we may call the body of the emotion. (p. 315)

The tying of emotion to instinct meant that a particular view of emotion and strand of emotions research, that of the ‘basic emotions’ approach, was to develop in the work of later psychologists (Gendron & Barrett, 2009). It introduced the idea that certain

emotions were biologically and genetically inherited and universally experienced in contrast to others which were culturally acquired. The effect of this was to separate out the emotions and to bestow on certain emotions a particular psychological significance. Spencer gives the example of fear, as being one such 'basic emotion', in arguing that it was, "nothing else than an impulse, an emotion, a feeling, a desire. To have in a slight degree those psychical states accompanying the reception of wounds, those which express themselves in cries, those which are experienced during flight, is to be in a state of what we call fear" (Spencer, 1855, p. 356). This view of emotion, echoed later in the century in the work of functional psychologists, James, Angell and McDougall, will be described below, as will the down grading of the usefulness of introspective accounts of emotion as result of this understanding of emotion, particularly in the work of the last of these theorists.

In the late nineteenth and early twentieth centuries, functionalist descriptions of emotion had fully incorporated ideas of emotions. These were now often being equated with instincts. William James, for example, stated that "Instinctive reactions and emotional expressions...shade imperceptibly into each other. Every object that excites an instinct excites an emotion as well" (James, 1890b, p. 442). Like the instinctiveness of a baby crying when its needs are not being met, for James some emotions were an organic response to a stimulus. For him the usefulness of physiological explanations of both instincts and emotions were that there was a possibility that a comprehensive theory to explain the behaviour associated with instinct and emotion could be provided; one which describes what happens within the body to cause both emotional and instinctual behaviour to occur. He argued that the strength of reaction of the 'coarser' emotions - anger, fear, love, grief, joy and hate - may be related to an innate, instinctual and physical response. Although James did not particularly develop this connection in his work, other theorists were far more definite in their arguments that emotions and instincts could not be studied as separate entities.

James Rowland Angell (1869-1949), whose comments on the acceptance of evolution in psychology have already been mentioned, was instrumental in forming, along with John Dewey, the functional school of psychology in Chicago. For Angell (1906), psychology could not simply be defined as the "science of mind" because that implied that it was the study of only "normal human processes" but he argued, as it included

the study of animals and the “insane”, it should be understood to be the study of all “consciousness everywhere” (p. 2). Although he argued that introspection was still the principal method in psychology, it was also to be supplemented, although, not replaced, by other means of observation,

Moreover we are able to supplement introspection by immediate observation of other individuals. It is thus possible, for example, to detect much which is most characteristic of the emotions, such as anger and fear, by watching the actions of persons around us and noting their expressions, gestures, etc. The facts we thus obtain must be interpreted in terms of our own direct knowledge of our own experience gained introspectively. (Angell, 1906, p. 6)

It is no coincidence that Angell uses the example of emotion to illustrate the need for other methods. As has been described above, in the section on physiology, the introspection of emotion produced descriptions of emotion which did not fall neatly into the expectations of what a rigorous scientific analysis should look like. For functionalists, such as Angell, a scientific psychology should not only describe the mental states but should ascertain their purpose also. Instincts were viewed in evolution as having, both in animals and in humans, a particularly important significance for the survival of the organism. If emotions were connected to instincts, the purpose with which each emotion arose could be stated, and a truly scientific understanding of emotion could emerge. In fact, Angell appeared to equate instinct with some psychological events which would have previously been viewed as emotions. The instincts he described as, “Fear, anger, shyness, curiosity, affection, sexual love, jealousy and envy, rivalry, sociability, sympathy, modesty(?) [sic], play, imitation, constructiveness, secretiveness and acquisitiveness” (p. 297), before concluding that “A perusal of our list brings at once to notice the union of instinct and emotion” (p. 297).

Like Angell, the English psychologist William McDougall (1871-1938) was definite in his tying of emotion to instinct. Having moved from Oxford to Harvard University in 1920, he was professor of Psychology there until 1927 and as will be described was a stout defender of introspection against behaviourism. As Boring describes, and as will be discussed in more detail in Chapter Six, McDougall, tried to find a third way between introspection and behaviourism in stressing that the minds of individual

organisms express themselves in both experience and behaviour. However, McDougall was scathing about the narrow and restricted view of psychology as the science of consciousness that he saw as persisting in the discipline, the method of introspection itself and its disadvantageous effect on the study of emotion, in particular. Unlike James and Angell he did not argue for introspection as the primary method of psychology but, rather, stated that

The insistence upon introspection as the one method of the science tended to prolong the predominance of this narrow and paralysing view of the scope of science; for the life of emotion and the play of motives is the part of our mental life which offers the least advantageous field for introspective observation and description. (1915, p. 6)

Although, as will be described in Chapter Six, he was to be a great defender of introspection against behaviourist attacks, he argued that introspection could only be useful to carry out a preliminary understanding of the mind. Psychology must, he argued, “Above all...aim at providing a full and accurate account of our constitution, the innate tendencies to thought and action that constitute the native basis of mind” (p. 15). Therefore, in McDougall’s work the correlation between instinct and particular emotions becomes even more robust, and his ideas about emotion developed, not simply through introspection, but through the development of comparative psychology. He referred somewhat to experience as he discussed emotion and instinct, for example, stating that,

We may then define an instinct as an inherited or innate psycho-physical disposition which determines its possessor to perceive and to pay attention to, objects of a certain class to experience an emotional excitement of a particular quality upon perceiving such an object, and to act in regard to it in a particular manner, or at least to experience an impulse to such action. (1915, p. 29)

However, the emphasis in his descriptions of the emotions was not on how these are experienced but rather on the instinctual expression. He argued that the primary emotions are those related to the instincts in “higher animals” (p. 49), there being seven distinct emotions related to instincts; those of fear, disgust, wonder, anger, subjection, elation and tender emotion. In producing this taxonomy, McDougall is scathing of arguments, based on introspection, that emotion cannot be classified because the emotions are not easily delineated from each other,

It has often been remarked that the emotions are fluid and indefinable, that they are in perpetual flux and are experienced in an infinite number of subtle varieties. This truth may be used as an argument against the propriety of attempting to exhibit all the many varieties of our emotional experience as reducible by analysis to a small number of primary emotions. (1915, p. 45)

Thus McDougall rejected the accounts of emotion reached through introspection alone and exhibited a mistrust of the findings of introspective analysis, in favour of an account of emotion which allows for the emotions to be clearly delineated and to be described individually. In tying particular emotions to particular instincts - the instinct of flight with fear and the instinct of curiosity with the emotion of wonder, for example - he demonstrated how it may be possible to classify the emotions scientifically, even if it meant, as described at the end of Chapter Three, that some emotions, such as joy, which could be studied through introspection, are rejected as being emotions in his account.

In the work of the functionalist psychologists, there were, therefore, three main effects of the conceptualisation of emotion as instinct which meant that subjective experience was rendered less relevant to the study of emotion. First, the description of emotion as an instinctive, unconscious and automatic process, meant that the introspective analysis of the conscious experience of emotion could not be solely trusted as a method by which to understand emotion. Second, because consciousness did not discriminate between emotions that occurred as a result of instinct and those that were culturally inherited, the divisions between these could not be examined by introspection. Third, looking at the experience of emotion could say nothing of the purpose with which it arose or the instinct to which it was connected and so could not present a fully scientific account of emotion. Thus, the changing conceptualisations of emotion, as developed through evolution, were beginning to alter the status of experiential accounts of emotion. The need to understand how emotion was experienced, although implicit in the work of functionalists such as McDougall, was secondary to the purpose with which these psychologists observed emotion; that of understanding the purpose and function of emotions.

4.3.3 Conclusion

This section has described the impact of evolutionary accounts of emotion on the understandings of emotion that were produced during this period. It has shown in the work of Spencer, Darwin and the US functionalist psychologists a movement away from emotion as a subjective experience and a movement towards a concept which was concerned with understanding its function, rather than its feeling. The embracing of evolution by psychologists in the US began to drive the study of emotion in a different direction from that with which psychologists had started out but promised the means by which to describe emotions as universal, adaptive automatic physiological responses.

4.4 Conclusion

This chapter has described the growth of other methods of observation of emotion in the late nineteenth century and has described how these became increasingly important, first as a means by which to supplement the perceived deficiencies of the introspective analysis of emotion and second, as a means to study particular aspects and views of emotion that were not available through inner reflection. It has shown how the incorporation of physiological and evolutionary understandings of the mind and body into psychology radically altered the subject matter and methods of the discipline. As a consequence, particular understandings of emotion began to be produced which were less about how emotion was experienced and more about how it looked as it was observed in other people, or in animals. This had an effect on British and US psychology of a down grading of the perceived usefulness of the examination of experience in the study of emotion. Physiology, in particular, was a source of scientific certainty for an ephemeral and elusive phenomenon and seemed to promise data from which the universalities of emotion could be discerned and measured and from which a consensual understanding of emotion could emerge. The use of these other sources of knowledge to describe emotion were, to some extent, attempts at

pinning down what emotion was. It did, however, have the effect of muddying the waters as it moved the understanding of emotion away from being defined as a subjective experience to the production of multiple ways of defining it.

However, there was one late nineteenth century US psychologist who continued to argue that the purpose of psychology was to describe the mental states and subjective experiences only. Introspection began to be downplayed in functional and behavioural accounts of emotion, but as, will be outlined in the following chapter, Edward Bradford Titchener was the strongest advocate of introspection in psychology at this time, albeit he had particular views as to how it should be conducted. The following chapter will describe the sort of introspection he advocated and its impact on the observation and definition of the subjective experience of emotion.

CHAPTER 5

EXPERIMENTAL INTROSPECTION 1890-1930

The purpose of this chapter is to examine the work of E.B. Titchener and that of the structuralist psychologists. It will look at the effects of the controlled form of introspection which they advocated on the understandings of emotion that they produced. It is mainly concerned with the question of whether these controls brought about consensual rather than idiosyncratic introspective accounts of emotion as intended, in contrast to those produced by psychologists as described in Chapter Three. It will first describe the form of introspection advocated by these theorists, discuss some of the difficulties of studying emotion using this method and then go on to examine the question of consensus.

5.1 Introduction

Those who remember the psychological laboratories of twenty years ago can hardly escape an occasional shock of contrast which, for the moment, throws into vivid relief the difference between the old order and the new. The experimenter of the early nineties trusted, first of all, in his instruments; chronoscope and kymograph and tachistoscope were - it is hardly an exaggeration to say - of more importance than the observer;...There were still vast reaches of mental life which experiment had not touched;...The movement towards qualitative analysis has culminated in what is called, with a certain redundancy of expression, the method of "systematic experimental introspection"...A great change has taken place, intensively and extensively, in the conduct of the introspective method. (Titchener, 1912a, p. 427)

As was described in the previous chapter, US functionalist psychologists embraced various methods in their work. In contrast, there was one US theorist who stood out for the method of introspection as the only method that could be used to study the human mind: the English psychologist, Edward Titchener. Titchener's introspection

was a method designed to produce data in the same sense that the 'inspection' of objects produced data in physics. As will be described throughout this chapter, he attempted to control the way in which introspection was conducted, in order to standardize it as a means by which the idiosyncratic understandings of the mental states could be ironed out and replicable data produced. Edward Bradford Titchener (1867-1927) had arrived in the US via Germany and Wundt's laboratories in Leipzig. On completing his apprenticeship in Germany, he accepted a position with Cornell University and became Professor of Psychology there at the tender age of twenty-eight. Although he was very much an advocate of Wundt's methods, he placed much more emphasis on introspection as a methodological tool than the limited use his mentor advocated (Danziger, 1980). As a result, Titchener's name became synonymous with the defence of introspection. First, because he believed in it so strongly, and, second, because of the profile that he had as a result of arguing for his own 'experimental psychology' (Titchener, 1898). As both Boring (1929) and Heidbreder (1933) describe, Titchener fought vehemently for what he argued was the only real purpose of psychology: "The historical conditions of psychology", he claimed, "rendered it inevitable that, when the time came for the transformation from philosophy to science, problems should be formulated, explicitly or implicitly as static rather than dynamic, structural, rather than functional" (1898, p. 453).

Although, initially, Titchener's branch of psychology did not have a name, as he set himself up against the functionalists the term "structuralism" was applied to his work, as a description of what he believed the primary aim of psychology should be: that of determining the structure, elements and processes of the mind (Heidbreder, 1933). He argued that structuralism was the real scientific psychology and that functionalists had not shaken off the metaphysical roots of their philosophical ancestors (Titchener, 1898). He was not against the discovery of the evolutionary origins of the mental processes but believed that introspection was sufficient to find the simple elements out of which more complex ones were built. He believed, further, that the experimental introspective method was essential, not only, to show that psychology could rank alongside the other sciences but that it was superior to other sciences because it could describe the mental processes through which the observations of scientists were conducted.

Titchener's introspective method was quite different from that used by previous British and US psychologists. The latter's, he argued, had been inherited from the metaphysical speculations of philosophy³² and therefore had no place in psychological science, even if, as Danziger (1980) points out, Titchener himself had acquired his enthusiasm for introspection from his reading of JS Mill as a student. However, those psychologists who, like Titchener, followed Wundt in advocating the experimental method disparaged the kind of introspective method on which the discipline of psychology had been built: E.W. Scripture (1864-1945) naming it, as mentioned, as mere "armchair psychology" (Klein, 1942, p. 226). On reflecting on the progress that had taken place from the previous formulations of introspection, Titchener stated, "What we knew about introspection, twenty years ago, is very fairly summed up in such a book as Sully's *Human Mind*. To-day, if we are still far from agreement and from perfect comprehension, we have at least progressed beyond the stage of generalities to that of monographic detail" (1912a, p. 428). Described by Boring (1929) as "pure" introspection, Titchener's experimental introspection was a new method for what was termed the 'New Psychology' in the US. Indeed, as Heidbreder (1933) argued, it was, "one of the means by which American psychology made the transition from mental philosophy to science, learning to rely less on speculation and more on observation, to be less preoccupied with values, ethical and otherwise, and to pay more attention to facts, as facts" (p. 148).

Although Wundt had used introspective experimentalism in a limited way alongside the recording of physiological measurements, he viewed it as having a somewhat limited role (Green, 2010). Titchener was to give it a more prominent role in experimentation and, in fact, understood it as being of more value than physiological measures. Further, in comparison to Wundt, Titchener, in theory at least, suggested that a far wider range of psychological elements could be open to analysis through the use of introspection. As well as the study of the perception and the senses of sight, hearing, taste, smell and touch, he argued for its use for the more complex mental elements of emotion, memory and language. He was not alone in this. Oswald Külpe

³² As Boring (1929) states, one of the purposes of Titchener's work was to distance himself from the Cornell philosophers and, according to Boring, he succeeded in doing so.

(1862-1915) and Karl Bühler (1879-1963) of the German Würzburg School, were concurrently carrying out a program of 'systematic experimental introspection' and although Titchener to some extent was really quite isolated in terms of the US psychological landscape, his own perceived authority as the upholder of a proper experimental program was supported via the work done on the continent.

Although, the 'experimental method'³³ as it was called, was quickly discarded in the rush to embrace behaviourism in the US both prior to and after Titchener's death, the work that it produced during the thirty five years or so in which it was part of the landscape of psychological research cannot easily be ignored. As Danziger (1990) describes, this period was significant because it, 'revealed many of the problems inherent in the Wundtian synthesis of rigorous experimentation and mentalistic objects' (p. 42). For a different reason, Flügel (1933/1964) also argues that this period of psychology was a significant one. He states, "That the method is...not sterile, is shown by the volume of useful work that has been done at the Cornell laboratory during the 35 years when Titchener was in charge there" (p. 195). Although this period of structuralism in the US has often been dismissed as not being particularly important in terms of the advancement of psychological knowledge, it did leave a legacy. Titchener was not the only structural psychologist in the US. Psychologists such as Margaret Washburn, Walter Pillsbury and Madison Bentley, all prominent names in early twentieth century US psychology, produced work influenced by Titchener's ethos. This was a critical time in the history of psychology because, as Daston and Gallison (2007) describe, it was a scientific era in which the promotion of objectivity and the elimination of its opposite, subjectivity, became a leading initiative in science generally, as Green (2010) discusses in relation to Titchener's work. Titchener and his fellow experimentalists had to make a strong case as to the ability of introspectionists to be detached enough from the object of their introspection in order for their data to be obtained objectively (Green, 2010). Nevertheless, Titchener continued to use the term 'subjective' to refer to his method, in the sense that it used the internal thoughts and experiences of individuals as data. He attempted, however,

³³ In 1904 Titchener, who was not a member of the APA, set up an informal group of 'experimental psychologists' – the term was taken to mean that which Wundt and his colleagues had given it, whose tradition Titchener was following.

to make sure that the results were as standardised as possible and to eliminate the idiosyncratic results which had previously been obtained through the introspective method of 'armchair psychology'. Therefore, although Green struggles to find much evidence of Titchener directly referring to his method as 'objective', it is clear that objectivity was a goal which the structuralists were aiming for. Washburn (1922), for example, in defending the method against attacks from behaviourism, presented a paper at the 1921 meeting of the APA called *Introspection as an Objective Method*. She argued that, "Introspection appears thus to give results as trustworthy as those accepted in other descriptive sciences, which themselves, indeed, often rely on introspective evidence" (p. 14). If introspection was to survive in psychology, an argument had to be made for it, paradoxically, as an objective, rather than subjective, examination of subjective experience.

In showing how Titchener attempted to make introspective data objective the following section will describe the way in which Titchener standardised introspection so that it was not subject to the idiosyncrasies of the thought of the individual experimenter. The rest of the chapter will go on to describe experiments on emotion and the particular difficulties associated with its study and examine the extent to which systematic experimental introspection achieved a consensus of understanding of emotion in psychology.

5.2 Introspection as an experimental method

'Conduct of an Experiment – A psychological experiment consists of *an introspection or series of introspections made under standard conditions*.' (Titchener, 1901, p. xiii)

This section presents Titchener's view of introspection as a scientific method, designed to study the mental elements and to produce ever more precise data on what these might consist of. Its purpose is to show how he attempted to regulate the method in order to control the kinds of data that were produced by it and to create a process which would provide verifiable, replicable and objective accounts of subjective experiences.

Titchener's books, in particular, *Experimental Psychology: A Manual of Laboratory Practice*^{34 35}, set out in a great amount of detail the scientific methods by which psychology was to be conducted. He felt that if it could be shown how psychological work could be carried out scientifically then psychology itself may be accepted as a science alongside physics and biology. It is perhaps surprising, therefore, that at the heart of Titchener's psychology was the method of introspection, given the arguments put forward by Comte and continued by others regarding the efficacy of that approach. However for Titchener, like the advocates of introspection discussed in Chapter Three, the subject matter of psychology: consciousness, experience and the elements of the mind, meant that introspection was an inevitable part of any psychological investigation. "Psychology", he stated, "may be defined as the *science of mental processes...a mental process* is any process, falling within the range of our experience, in the origination and continuance of which we ourselves are necessarily concerned" (Titchener, 1896, p. 5). Indeed, Titchener, went further. He believed, like Spencer, that introspection was indispensable to science, given that all scientific observation was conducted using the mind of the scientist as a tool of investigation. Psychology, he argued, was simply an extension of the other sciences in that, "the subject matter of all the sciences is the world of human experience" (1910, p. 24). Physics, he said, takes the point of view of experience as "independent of the experiencing individual", psychology, on the other hand, from the point of view *of* the experiencing individual. Psychology, therefore, did not stop at studying the effect of the environment but studied the human mental processes, of sight and language, for example, through which the environment was mediated and explained.

The aim of psychology was to ascertain of what elements, simple and complex, the mind was constructed and of how these were connected to the nervous system³⁶. As Titchener argued, "The first object of the psychologist, therefore, is to ascertain *the*

³⁴ This was published in four parts, Qualitative Experiments (student's manual); Qualitative Experiments (instructor's manual); Quantitative Experiments (student's manual) and Quantitative Experiments (instructor's manual)

³⁵ Boring (1950, p. 413) states with regard to these "Even now, half a century later it is hard to name a more erudite set of volumes or single book in English, in psychology, by a single author"

³⁶ Titchener argued for psycho-physical parallelism – that is that the body and mind functioned separately, rather than the mind being dependent on the body, and that processes in one accompanied processes in the other

nature and number of the mental elements. He takes up mental experience, bit by bit, dividing and subdividing, until the division can go no further. When that point is reached he has found a conscious element” (1896, p. 13) and that,

The primary aim of the experimental psychologist has been to analyse the structure of mind; to ravel out the elemental processes from the tangle of consciousness, or (if we may change the metaphor) to isolate the constituents in the given conscious formation. His task is a vivisection, but a vivisection which will yield structural, not functional, results. (1898, p. 451)

While other methods were useful in producing particular kinds of data about human behaviour, introspection was given the place as the principal method of this structural school of psychology as no other method enabled psychologists to get at experience and, therefore, the elements of mind in such a direct manner. This direct observation needed to be strictly controlled and taught, however if it was to produce the kinds of information that the structuralists saw as valuable. Introspection, therefore, as a method, was to be as subject to strict controls as the methods of observation in physics and biology were. The following points, gleaned from Titchener's textbooks, while not covering entirely the detailed specification of the method, gives a sense of the rigorousness of the structuralists' introspective method.

Titchener (1910) was clear that there were two parts to experimental introspection, both of which had to be conducted correctly if the introspection was to be reliable. First, the particular psychological phenomena under investigation must be attended to and secondly, a verbal record of the phenomena was to be made and recorded. The first part was to focus on the immediate experience; at what was happening in that moment in which the experiment was taking place, without reference to past experiences or feelings. The descriptions were to entail only the psychological processes without reference to the object being observed. There was always the temptation to fall into the bad habit of, what Titchener termed, “stimulus error”; the mistake of describing the object or stimulus present rather than the internal perception of the object. In everyday life, reference was often made to objects when discussing experiences. For example, someone might say, “The path is rough”, rather than describing his or her own experience of walking on the path such as “I feel a sensation of roughness”. For scientific psychology, however, this way of describing the

experience was not correct. Titchener (1910, p. 218) stated that “for one very dangerous source of error, in experiments upon the comparison of supraliminal sense-distances, is that the observer tends to judge, not in terms of sensation, but in terms of stimulus”. English (1921), in presenting the rules for introspection, specified the means by which to deal with the temptation to describe the stimulus: “Rule 4: 'Avoiding the "stimulus error," make no attempt to estimate the stimulus; confine your report to your consciousness, to your experiences. Nothing else is introspection; it is merely physical observation under difficulties” (p. 409).

Titchener (1901), further, entered into practical considerations in a great amount of detail, specifying how experiments were to be conducted and the best conditions for good introspection. Experiments should be conducted by an observer (O), the person doing the introspection, along with an experimenter (E), who will record the results and should be in charge of any physiological recordings^{37 38} that are to be made. They were then to swap roles and repeat the experiment in exactly the same way. He also identified the need for the observer to be in the right frame of mind: not fatigued or in a negative mood. The observer, as the instrument through which experience was to be analysed and recorded was, like the instruments which measured physiological response, to be as far as was possible in a fit state to make accurate and complete statements: “the rule of psychological work”, Titchener (1899a, p. 35) believed, was, *“Live impartially, attentively, comfortably, freshly, the part of your mental life which you wish to understand. As soon as it is past, call it back and describe it.”* According with the purposes of structuralist psychology, the elements of the mind were to be expressed in increasing detail. “Analysis”, he maintained, needed to be tested by asking, “Has it gone as far as it can go? And: Has it taken account of all the elements which are contained in the experience? To answer the first question the analysis must be repeated” (1896, p. 14). Analyses must also be compared and tested against those

³⁷Following Wundt's example, both qualitative and quantitative work was to be done. The former was introspective analysis, the latter, measurement of physiological response. Titchener, however, stresses that qualitative is in no way inferior or less accurate than quantitative but each produced different but equally useful kinds of data. For qualitative work he says, 'What the distinction implies is rather this: that the student's attention is directed not to the 'How much?', or the 'How well?' of mental function, but to the 'How?' of mental structure.' (1901, p.xxi)

³⁸Introspective analysis was termed the 'method of impression, physiological methods as 'methods of expression'.

of other observers to ensure that it had gone as far as it can go. Again English (1921) was also clear on this as a rule,

Our first rule, therefore, is: As far as possible, describe the constituent features of the experience in terms that resist further analysis. Describe in terms of part-processes which cannot be thought of as being themselves made up of smaller or simpler part-processes, or of part-processes found in other contexts. (p. 406)

This kind of analysis did not necessarily come naturally to those new to the method. The key, therefore, to making sure that the method was conducted correctly was to have a long period of training for students of psychology, during which they could hone their skills. Titchener placed a great deal of emphasis on training of observers as a means to ensure proper introspective experiments in psychology. The strict adherence to particular practices in psychological experimentation was argued for in all of his textbooks but these were mainly laid out in his *Experimental Psychology*, which was to be used as a reference for the instruction of students learning the method. In the introduction to the instructor's volume of the qualitative part of this work he introduces the section as follows,

This Course aims at two things: first, and more especially, to teach the student to psychologise and secondly to acquaint him with the most reliable methods and most securely established results of experimental psychology. Information concerning methods and results can be obtained, without much trouble, from the text-books. But introspection cannot be learned from books. If one is a born psychologist, it may be learned from the experience of ordinary life; and learned the more quickly, if this experience is supplemented by reading and by listening to lectures. As a general rule, however, and to the average student, an understanding of the introspective method either comes by way of the laboratory or does not come at all. (1901, p. xix)

Instructors were to assess students as to the possession of psychological qualities which predisposed them to introspection and laboratory work. Some students were more likely to be suited to psychological work because they were by nature "objective" minded. Others, those whose disposition was to be "subjective" could be trained to be objective,

Most natures are sufficiently objective to afford a foothold to training; and for the student who is willing to see the matter through, training will accomplish wonders. Set a man to work for a year: hold him strictly to the work, insist that he be thorough: show him his faults unflinchingly, in all their glaringness; at

the same time, work with him, sympathetically, as ready to encourage as to blame: fit your praise and blame alike to his character and disposition, and, though you have not changed his nature, you will have wrought a very considerable change in his methods and attitudes. (1901, p. xxvii)

In any case, practice was the key to producing correct introspective accounts. With sufficient practice, students could provide reports which were similar in nature to trained introspectionists. One of the tests of the efficacy of experiments and of introspection was the production of structured and replicable accounts of psychological phenomena,

This experiment shows, in a striking way, the effects of practice. The report of a wholly unpractised observer is a mere chaos. With attention, the uniformity of the phenomena soon becomes apparent; and presently the observers who at first gave radically different accounts of the after-image will reach agreement upon all essential points. (1901, p. 48)

Indeed, replicability was a condition of valid scientific observation and for Titchener was the key to dispelling the criticisms that had been aimed at introspection by its opponents that it produced idiosyncratic, rather than consistent results between theorists. One way of doing so, was to tightly control the conditions under which the introspection was conducted in order that another psychologist could easily repeat the experiment: “Experimental psychology insists that the psychological method of introspection shall be employed under 'experimental' conditions; that is, under conditions which reduce the possibility of mistakes to a minimum, and which enable one enquirer to test or check the work of another by exactly repeating it for himself” (1901, p. 19). Scientific investigation required that the same results be obtained over and over again, something which had not happened with the use of introspection up to this point. Titchener, therefore, set out to show that introspection could be an objective method which could show something consistent about the process of the normally functioning human mind.

Although impartiality was a key to proper introspection, Titchener's introspective analyses of the mind did not begin from first principles but were to be structured according to particular attributes, describing the mental elements in the way set out by Wundt. Titchener's analysis began from the point of view that there were three primary elements: sensation, image and affection,

Consciousness, instead of being a shapeless tangle and maze of various intertwined and interwoven processes – as it appeared to us to be when we started out on our enquiry – has proved capable of arrangement and simplification. You may, it is true, raise the objections that our table of contents is, perhaps, not inclusive of every known mental state. Where, you may ask, is emotion...? Well, you must take my word for it, that...other states of mind or mental experiences can be derived from these three simple states³⁹ mixed in different proportions. (Titchener, 1895, p. 430)

These elements were viewed as being the smallest parts to which consciousness could be reduced, and could not be “split up, by the most persistent introspection under the strictest conditions, into any simpler processes” (1899a, p. 37). Each predominated in different mental states: sensations were characteristic of perceptions and occurred in sight and sound, taste and smell; images were the characteristic elements of ideas and occurred if an object was not actually present as in a memory; affections were the main elements which made up feeling and emotion. Sensations and images had four attributes: quality, intensity, duration and clearness, but affection had the first three only. Observers were to describe the effects of different stimuli in relation to these attributes. Different taste experiences, for example, might be distinguished and described,

In many experiments O will report a pressure, temperature (warm or cold) or pain (stabbing, biting, burning) sensation. These concomitant sensations will be characterised somewhat as follows, (1) Sour is at first astringent; then, as it becomes stronger, burning; finally, purely painful. (2) Salt is attended by a weak burning, not rising to positive pain. (3) Sweet brings with it the perception of smoothness and softness. (Titchener, 1901, p. 102)

When feeling or emotion was being studied, the qualities of pleasantness or unpleasantness were to characterise the accounts, as will be described below. Introspective descriptions were directed to focus on these attributes when particular stimuli were presented in order that they were analysed in increasing detail.

This systematic experimental introspection, was designed, not only to present psychology as scientific but also to achieve consensus in the understandings of mental

³⁹ In this early article Titchener states that the three basic elements are 'ideas, feelings and efforts' (1895, p.430). However, in most of this work he describes these as being sensations, images and affections. Therefore it is the latter view that is discussed in this here.

elements and processes between psychologists. If the method by which these were studied could be controlled and systematised, then it would ensure the elimination of any confounding variables which might cause results to conflict with each other. This would remove the concern that introspection was not capable of producing consistent results. For emotion, as described in Chapter Three, this was particularly salient, given the discrepancies between the accounts of theorists that had been presented and the difficulties of reconciling these given the subjective nature of feeling. The following sections will examine the extent to which the standardisation of introspection managed to achieve consistency in the descriptions of emotion amongst structuralist psychologists.

5.3 The experimental observation of emotion

The reason, then, that our descriptive psychology of emotion is schematic, rather than analytical is, simply, that experimental psychology has so far neither found the time, nor the courage to take emotion into the laboratory. (Titchener, 1910, p. 473)

The experimental introspective study of emotion at this time in the US and Britain is characterised more by discussions as to its dearth than it is about particular experiments, methods or results. Only a few experimental treatments of feeling and emotion appeared in *The American Journal of Psychology*, *The British Journal of Psychology*, *The Psychological Review* and *The Psychological Bulletin* between 1895 and 1930 and most of these attempted mainly to examine the use of the method in relation to the study. Some of these, Hayes (1906), Titchener (1908) and Shepherd (1906), for example, relate to a repudiation of Wundt's tri-dimensional theory of feeling as will be discussed in the final section of this chapter. From Cornell, Nakashima (1909a; 1909b) published a couple of papers on the affective processes and in Oxford, Adolf Wohlgemuth (1919) addressed the lack of consensus in emotion by conducting a systematic experimental study of pleasure and displeasure. Throughout the twenties, P. T. Young (1921; 1927; 1930) and J. P. Nafe (1924) published four

papers between them addressing the issues of the study of affective elements using experimental introspection. Verwoerd (1926) and Conklin and Dimmick (1925) were the only psychologists to discuss how emotion, as opposed to its elements, could be successfully induced in the laboratory and Flügel (1919) had a paper published which described an attempt to take emotion out of the lab and to study it introspectively *in situ*. These papers were among the few that constituted the non-physiological experimental literature at that time. However, textbooks discussed the James-Lange and other theories *ad nauseum*. As Titchener (1901), himself, stated

Corresponding to this dearth of settled facts, we have a hypertrophy of theory and a large controversial literature. Partly because the theories are intrinsically interesting, and partly because of the sheer bulk of the literature, the fundamental issues of affective psychology are apt to be left out of sight. It is easier and more exciting to criticise so-and-so's theory of pleasure-pain, than to face the problem of the affective qualities for oneself ; and, indeed, theory has and, indeed, theory has had so wide a range that one can hardly turn in any direction without being confronted by some so-and-so's speculations. (p. 149)

Titchener's own discussion of the experimentation on emotion seems to be more of a promise of things to come, rather than actual descriptions of particular experiments or results. The number of experiments on feeling and emotion mentioned in his work was greatly limited in comparison to the far greater discussion of experiments on sensation. In fact, most of the chapters on emotion were of a theoretical, rather than experimental nature, even in *Experimental Psychology*, the ultimate guide to the use of the experimental method in psychology. The ease which was found in experimenting on the sensations or perception, for example, did not apply to the most intangible elements such as language, memory and emotion. The isolation of the former through the use of external stimuli seemed to be relatively straightforward. For example, experiments on sensations included the comparison of response to different colours or the experience of tasting a sweet drink and the effects of adding more sugar to the drink. It was far more challenging to elicit emotions such as anger, fear or joy in the lab and to then alter the stimuli in order to elicit other versions of these.

The experimental accounts of emotion by the structuralists tended not to focus directly on descriptions of particular emotions themselves anyway, but on the simpler elements which made them up – that is, the connected affective qualities which were produced

in response to external stimuli. The rare accounts of experiments on feeling and emotion that were created at the time tended to centre around the two aspects of affection which Titchener would admit, those of pleasure and unpleasure: “Feeling is a mixture of perception and affection, in which the affection preponderates...Now there are only two qualities of affection: pleasantness and unpleasantness” (Titchener, 1896, p. 218). Each emotion fell somewhere on a continuum with these at either end. Experiments were designed to test which of these was invoked by particular stimuli, for example,

Method – suppose that the subject is in position, as described in § 33 (2). After a short time has elapsed, he is informed, say, that he may smoke. The pleasure of the unexpected news shows itself in the records of pulse, breathing and volume; and if the dynamometer be squeezed while the cigar is being cut and lighted, it also gives evidence of the affective processes. After another brief interval, the cigar is flicked out of the subject's mouth by the assistant, apparently as a practical joke. The resultant unpleasantness is clearly marked upon the instruments - The manifestations of the emotions of pleased surprise and resentment are here identical with those of simple pleasantness and unpleasantness. (Titchener, 1896, p. 224)

Although, in theory, Titchener argued that the study of emotion in the lab was palpable, he did not, however, publish any data on emotion in his books or in papers. Beebe-Center (1951), argues that the reason that Titchener did not develop a program of the study of emotion was because he was unable to, since the truly emotional aspect of emotion was meaning, and Titchener (1912b) consistently argued that science does not deal with meanings. In allowing the observer to describe their subjective experiences fully, Conklin and Dimmick (1925) had found in their study of fear that the unpleasant feeling of the emotion, was produced through the meaning that the stimulus had for the observer. They stated, “It appears...that the presence of fear depends not upon any particular group of processes such as organic sensations, but rather upon some perceptual meaning of the object for O, a meaning which is carried by the particular sensations, images, or both, that are called out by the stimulus” (p.100)

Given that Titchener argued that a focus on the stimuli during introspection was committing the ‘stimulus-error’, he would have dismissed the introspective reports that

Conklin and Dimmick had gathered. For example, in response to touching wet macaroni while blindfolded, one observer's report was as follows:

That is a violent reaction. It feels awful. It makes me shiver and shake inside and my stomach feels 'all mixed up.' It is so ugly and awful. It is the most unpleasant feeling I have ever had. I can't control myself. I want to wipe it off my hand. I think it is a bunch of worms and I have always had a horror of worms. (1925, p. 98)

Given that emotions were elicited by objects and events in the environment, it was often meaningless to merely report the subjective feelings without reference to why the particular stimulus had that effect. However, this was not the only reason why Titchener's system prevented the study of emotion from flourishing. There were, also, a number of practical difficulties to deal with and, as had been an issue in earlier introspective accounts, there was the difficulty of achieving consensus between the introspective reports of observers. These will both be discussed below.

5.3.1 Difficulties of studying emotion in the lab

The acknowledged dearth of experimental work on emotion was viewed, in part, as being related to the complexity of emotion and the much greater difficulty of isolating particular elements of it. Titchener, himself, had described the emotion of anger, for example, as follows,

The emotion of *anger* seems, at first sight, to be a single experience; it has a single name. Really, it is highly complex. It contains *e.g.*, the idea of the person with whom one is angry; the idea of the act of his, at which one is displeased; the idea of a retaliatory action on one's own part; a mass of bodily sensations, attending the flushing of one's face, the tendency to clench the fist, the bracing of the whole muscular system – one 'feels stronger' when angry. It begins with a feeling of displeasure, of pained surprise or wounded pride; but this soon gives way to the pleasantness of anger itself...These processes...all take part, crossing or recrossing, shifting and recombining, in the emotion. (1896, p. 13)

So as much as he believed that introspective analysis could, and had, shown the mind to be capable of being broken down into increasingly smaller constituent elements and

processes, the practicality of separating these was another matter altogether. The elements of ideas, sensations and affections all appeared to conflate in this one mental and physical state to produce an experience from which these seemed almost impossible to disentangle. It also took a great deal of time and training for experimenters to be proficient enough in the method to study emotion and even then it necessarily involved more of an exploration, than an experiment. Titchener did not include descriptions of methods to investigate emotion in *Experimental Psychology* because the subject was viewed as being one of the most complex processes of the mind. It was only when students had become proficient in introspection of the simpler processes they would be ready to move on to the study of these,

Thus, experiments upon the more complex processes or consciousnesses (memory, imagination, reasoning, emotion and the like) are, for the most part, ruled out of a Manual by the time limit; they require systematic work, preceded by a term of practice, and so take on the form of investigations rather than of single experiments. (Titchener, 1901, p. xxxiii)

Further, for many theorists who opposed Titchener's work, there was a belief that it was not simply the complexity of emotion that caused the dearth in accounts of emotion to be produced in a laboratory setting but that it was the method itself. Titchener did not shy away from the criticisms but tackled them head on. He stated, "Two reasons are usually given for the deficiency: first, that it is impossible to bring emotion into the laboratory; the emotions there set up are artificial, washed-out, insipid affairs; and secondly that we have no method for the study of emotion, since attention to affection defeats its own object" (Titchener, 1910, p. 472). There were certainly difficulties of invoking genuine emotional feeling in the laboratory: the element of surprise shown in the cigar experiment describes the sort of methods that would be required. If the observer was to study the emotion introspectively, they would need to be prepared for what was about to come in order to be in the correct state of mind to analyse the effects. Furthermore, the detachment that was required to study emotions introspectively, particularly in the controlled manner demanded by the standardised form of introspection could interfere with the actual feeling. To rationally consider one's own emotion during a fit of anger, seemed somewhat incongruous. However, for Titchener these objections held no water, "Neither reason", he argued, "is

valid....the laboratory offers the very great advantage of isolation; we can get the emotion pure, and without interruption from extraneous processes” (Titchener, 1910, p. 472). His firm belief in the method led to the rejection of these very valid reasons why the place to study emotion might not be the laboratory.

However, although Titchener did not believe objections aimed at the study of emotion *invalidated* the use of experimental introspection, he did recognise that difficulties needed to be addressed. He acknowledged the paradox of experiencing emotion and providing a rational and detached account while being caught up in the feeling. For emotion, Titchener argued, it was especially important to allow the feeling to run its course before it was reflected on because of the interference from thoughts that could interrupt the flow,

Suppose, again, that you are observing a feeling or an emotion: a feeling of disappointment or annoyance, an emotion of anger or chagrin. Experimental control is still possible; situations may be arranged, in the psychological laboratory, such that these feelings may be repeated, isolated and varied. But your observation of them interferes, even more seriously than before, with the course of consciousness. Cool consideration of an emotion is fatal to its very existence; your anger disappears, your disappointment evaporates, as you examine it. To overcome this difficulty of the introspective method, students of psychology are usually recommended to delay observation until the process to be described has run its course, and then to call back and describe it from memory. Introspection thus becomes retrospection; introspective examination becomes *post mortem* examination. (1910, p. 22)

This concurred with what had been argued by several philosophers and psychologists throughout the nineteenth century, including Mill (1891) and James (1890a): that introspection was always really 'retrospection' because descriptions came from a memory of the events, even if that memory was seconds old. Observers had only to allow the emotion to subside before attempting to describe it. That is, the period between the psychological event and the description had to be a bit longer.

Secondly, he also accepted that the communication of feeling was an issue. The descriptions of emotion could never allow another theorist to experience the feeling of another and the words used were often inadequate to convey the essence of the subjective experience,

The difficulty of describing affection lies in the fact that spoken language ...communicates ideas and ideas only. If I say, 'I am very angry', you know that I am angry, but you do not feel my anger. A verbal description of affection is therefore always a description at second-hand. (Titchener, 1896, p. 101)

This had always been a problem for introspectionists, as was described in the section on James. It was not only an issue for the study of emotion but also in all areas of psychology, because introspective accounts presented individual phenomenological descriptions, and it was important that these descriptions could be replicated. The reliance on the words of different individuals to express what they felt meant that it was difficult to know if people had different experiences or if they were using different words to describe the same experience. The best way it seemed to some introspectionists to achieve consensus between observers was to find a common language. This practice was described by Washburn (1922), "The precaution adopted by those who use the introspective method consists in giving the observers a careful preliminary drill in the use of terms" (p. 103). This, of course, left introspective accounts open to the accusation of being carefully constructed. Washburn, however, defends this practice as not being any different from that used in the physical sciences,

Take, for example, the terminology used in reporting the very difficult observations on the structure of protoplasm; or such astronomical observations as those on double stars, needing years of practice; take the observations of planetary markings, or, in chemistry, the use of the Wheatstone bridge, which requires liminal discriminations of noise. These observations are wholly analogous to certain types of introspective work, where an actual external stimulus is given, but where the reactions to that stimulus are complicated and may vary greatly according to the degree in which the stimulus is reacted to in its details. (p. 103)

Although Washburn makes an interesting point, as will be described below in the work of Nafe (1924) below, the cost of using common terms was that understandings of emotion were accused of being mere artefacts of the laboratory and of moving away from the ways in which they might be described in ordinary life.

Titchener, also, conceded that because the observer was the conduit through which the emotion was to be known, his or her mood could affect the outcome of the experiment, "The way in which we receive impressions must naturally vary as our 'mood' varies" he stated. If we are unusually cheerful, all the stimuli of the series will tend to be

pleasant...The subject's mood must be carefully observed and noted by the assistant before the experimental series is begun.” (1896, p. 104). In relation to one experiment, he stressed the importance of the correct mood of the observer as they undertake some experiments,

In later affective work, we shall see reason to be very careful that O's mood, at the beginning of the experiment, is indifferent. Here indifference is not required. For even if O be in a mood to dislike everything, he will still dislike some things less than others; and if he does that, his judgments are valid for our purpose. Of course, a mood of steady indifference is favourable to the mechanising of the whole procedure. (1901, p. 154)

As the 'machine' which was employed to observe the emotion, the observer, like the galvanometer and the kymograph, had often to be calibrated to a neutral or indifferent, position so that he or she did not influence the account. This endeavour to observe emotion from the 'objective' position of an indifferent mood is an interesting position to take. It shows just how important that requirement of science was that it was necessary for introspectors to assume a detached and neutral position even on something as physically and mentally involved as experiencing an emotion.

It is no wonder, perhaps, that given the difficulties which had to be addressed in order that feeling and emotion be studied in a manner which was convincingly scientific, a program of investigation into emotion at Cornell never really got underway. So, if the behaviourist era was later to be described as the “Dark Ages” of emotions theorising in psychology (Gendron & Barrett, 2009, p. 317), the period prior to it could be described as the “Dark Ages” of experimentation in that field. Although theories were advanced during this time, it seems that this standardised form of introspection inhibited the exploration of emotion in a way in which the less straightened version did not. In admitting that there was indeed a problem with the scientific study of emotion in psychology, Titchener (1901, p. 150) was still hopeful of solving the problem. He argued that this could be achieved, first, by more of a reliance on physical correlates of emotion: “we must look (i) to physiological advance...and to increased knowledge of the physiological basis of our curve variations”. In doing so, he contradicted his own view, often expressed, that physiological measurements had only a secondary role in the understanding of emotion. Secondly, he argued that the way

forward was through the, “gradual emergence of an introspective consensus. This last is not entirely hopeless, seeing that introspection is constantly sharpening and refining, under the influence of the experimental method at large” (p. 150). Introspective consensus, however, as will be described in the following section, did not materialise as shown by the few papers that *were* published at the time which addressed the issue using a structuralist approach

5.3.2 Lack of consensus between accounts of emotion

Although there was more control over the way in which introspection was conducted during this period of psychology, it appeared that this did not solve the problem of individual theorists arriving at different conclusions as regards emotion and feeling. There was a great deal of discussion still in the literature as to the continued problem of the differences which were apparent when different people introspectively observed what was expected to be the same experience. This section will describe the continued inability to achieve consensus and the attempts that were made to do so. It will show that if consensus of introspective accounts was to be achieved it was only through placing tight controls on the experience and descriptions of the observer. This resulted, however, in descriptions of emotion becoming an artefact of the laboratory.

This time in the psychological study of emotion was characterised by statements on the lack of consensus. Even the two most prominent experimentalists, Wundt and Titchener, could not agree on the qualities associated with the affective elements, causing not only one of the biggest controversies of the time in psychology but also in the history of the psychology of feeling and emotion. Having early on argued, like Titchener, that there was only one affective dimension: that of pleasure-unpleasure, Wundt (1896) changed his mind, and, in *Grundriss der Psychologie*, described a tri-dimensional theory of feeling. He argued that the pleasure-unpleasure dimension was not adequate to capture the variety inherent in the experience of feeling but that the affections were also be characterised by two other dimensions, those of tension-relaxation and excitement-inhibition. This constituted a fundamental shift from the

views of other experimentalists, including Titchener and resulted in a flurry of papers following Wundt's publishing of his theory⁴⁰. Opponents, with Titchener at the forefront, not only published theoretical accounts of why this could not be the case but also presented both introspective and physiological evidence as a means to back up their conclusions. Titchener replicated Wundt's experiments during which, Wundt claimed, the other dimensions became especially evident. He found that, for him, they did not; "I have, for myself, repeated the test often and again, and have varied it in half a dozen ways:...I get the same meagre affective results" (Titchener, 1908, p. 227). That Wundt's findings were not replicable meant that they could, therefore, be dismissed as incorrect by the US structuralists.

Similar to the disagreement described in Chapter Three between James and Worcester as to whose introspective account was correct, it took a personal turn. The argument that Titchener made for the difference in findings was that Wundt's subjective experience coloured his view of what he was observing, and so he came to an idiosyncratic, rather than a general conclusion about emotion,

First of all, then, how does Wundt arrive at his three affective dimensions? How does he prove that there are three, and that these three are pleasantness-unpleasantness, excitement-inhibition, and tension-relaxation? Well! His main reliance is on his own introspection. Wundt is a man of keen sensibility. He writes of feeling *con amore*: he is fond of quoting Goethe's *Farbenlehre*; feeling has played a larger and larger part in his psychological system as time went on. (1908, p. 216)

Underlying this statement was the accusation of a lack of sufficient objectivity in Wundt's observations of feeling. Further, Wundt had suggested that Titchener did not produce the same introspective accounts because his senses were dulled and Titchener returned this accusation: "If, now, Wundt retorts, that in this and like instances we are feeling-deaf and feeling-blind, may we not suggest, on our side, that he is organically anaesthetic? The lack of interest that Wundt shows in the organic sensations has always been a source of wonderment to me" (p. 227). Titchener also argued that Wundt had not carried out the introspective method adequately and derived false

⁴⁰ For example, Stevens (1903); Hayes (1906); Titchener (1899b; 1908) and Foster & Roese (1916).

conclusions, as a result: “Wundt can, of course, do no more than take language as he finds it. But I think that his actual choice of words bears witness to a conflict, in his thought, between two purposes: the purpose of transcribing his introspections and the purpose of maintaining the typical affective movement between opposites” (p. 221)

The disagreements over these different conclusions which had been reached via introspection, therefore, tended to focus on arguments about the dispositions or introspective abilities of the proponents. However, at the heart of the disagreement was something which was fundamental to the difficulties associated with the study of emotion. Wundt's theory represented the idea that feelings were far more complex than the pleasant-unpleasant dimension allowed for. It indicated that the experiences of feeling and emotion were far more nuanced and that emotions, even different instances of emotion, were singular and idiosyncratic,

The theoretical basis...seems to be the thought that, because every emotive attitude is ‘unique’, therefore the simplest characteristic processes of all emotions must be unique. Now the major premise in this argument is, in a certain sense, true: the feeling of moral obligation, the pride in the birth of your first baby, the satisfaction in a new dining-room carpet, your emotive experience under the Ninth Symphony, these are all ‘unique’ consciousnesses, each specifically different from all the rest, none reducible to any one of the others. (Titchener, 1901, p. 150)

Titchener agreed with this to some extent. He did not agree that more dimensions were required in order to explain the experiential differences between these feelings but rather argued that different sensations mixed with affections were enough to describe each experience. What this disagreement showed, however, as disagreements around the introspective analysis of emotion had always done, was that the experience of emotion was as individual as it was universal, as personal as it was collective.

While Wundt and Titchener were at loggerheads over introspective accounts of emotion, other papers that were produced during this time were also directly attempting to address this introspective lack of consensus. Adolf Wohlgemuth⁴¹

⁴¹ Wohlgemuth's main contribution to psychology was in relation to the motion aftereffect (MAE), using introspection as the method through which to produce this work (Wade, Thomson & Morgan, 2014).

(1868-1942), a German/British psychologist tried to do so by using introspection to produce a systematic experimental analysis of pleasure and unpleasure, stating that,

A great many theories as to the nature of the Feeling-elements have been advanced, yet the greatest possible divergence of opinion still obtains concerning this class of conscious processes. To elucidate, then, by carefully conducted experiments, and, if possible to settle some of the hotly controverted questions in the psychology of Feeling were the ends for which this investigation was undertaken. I also kept in view the possibility of ascertaining why it has happened that some of the most careful experimenters and observers have arrived at absolutely contradictory results. (1919, p. 4)

Wohlgemuth made the most comprehensive and systematic study of the affective elements associated with feeling and emotion in Britain and the US during the early nineteenth century during the years 1915-17. Therefore, the only systematic account of introspective experimentation on feeling and emotion in Britain and the US during this period was produced, surprisingly, not at Cornell but at Oxford University and although his work on emotion is now little mentioned, his published monograph in *The British Journal of Psychology* in 1919 on the subject is a rare example of systematic experimental introspection on feeling and emotion in action. Wohlgemuth had complete trust in the method of introspection: "If I experience a pleasure or a striving or a memory-image or anything else", he argued, "I simply experience it: one cannot go beyond this. To question the apodicticity of this is simply questioning my very *esse*" (p. 10). He did, however, add the caveat that he had used only very well trained and experienced observers. Indeed, he used some of the most prominent psychologists and philosophers of the time in Britain, including Carveth Read and J.C. Flügel.

In this extensive study of the results of the presentation of a wide variety of stimuli, Wohlgemuth gave a limited amount of instruction to the observers, leaving it open for them to describe their experiences in their own words. For example, one group was told "You will be presented with a number of stimuli, tactile, auditory, visual, gustatory, olfactory etc., and you are required to introspect closely, concentrating on the affective side, the feeling-tone of your experience. Describe your experience as well as you can in words" (1919, p. 15). The descriptions are quite loose and personal, with some focus on the quality of the experience but also on the feelings of the

observers. The result is a descriptive and broad introspective analysis. The research was ostensibly about induction of the dimensions of pleasure and unpleasure of the “feeling-elements”. Many of the descriptions, however, discuss, also, the emotions aroused by the situation. It is clear that when descriptions are produced in the lab they are surrounded by a gamut of different emotions which the structuralists often argued should be pushed to one side in order that the 'pure' introspection could take place.

The following descriptions, indicating the difficulties of concentrating on the task at hand, was given in relation to the pinching of the hand with a set of forceps for three seconds. The first, from observer X, is a somewhat detached account of the experience,

First a light scraping touch, then a second contact, then a Sn⁴² of P. which was perceived as the effect of a pinch. It was pretty distinctly localized at the lower outer margin of the left hand, around 2 ½ inches below the wrist. It differed from a point st or prick by the apparent existence of an interval of skin between the points of contact. Decidedly unpl, yet there was no impulse to withdraw the hand, all other cnns being masked by attn. (p. 102)

The second, from observer W, is a far more emotional account of the same procedure,

Repeated instructions in the foreperiod but this did not prevent there being an emotion of fear in the background of C. The Sn was at first indifferent and at the moment of first perceiving it. I once more repeated the instructions with the thought corresponding to the words: “Here it is, be careful and adopt the right attitude.” The background of fear still persisted and there was besides considerable excitement and tension. The Sn then changed its character and became definitely painful and unpl. The Unpls increased rapidly. I had the thought that I must examine and try to analyse the Sn and I suddenly recognised a heat Sn...fear gradually became complicated with an element of anger, which seemed to seek a vague outlet in an atactic violent movement of the body...There was also a tendency to cry out. This tendency seemed to be both an expression of the anger and the fear. This period was followed by an attempt to control myself and to bring the attn once more to bear upon the quality of the Sn. (p. 65)

The experiments induce emotions, not only of anger and fear but also of disgust, irritation, surprise, wonder and excitement. This introspective analysis appears to

⁴² Key to the shorthand used here - Sn: sensation; P: pleasure; St: stimulus; Unpl: unpleasant; Attn: attention; C: consciousness; cnn: conation.

produce more complex and broad descriptions than Titchener would have allowed for in his striving to reduce feeling into its constituent elements and indicated that the observers experienced both the stimulus and the situation differently. Again, if left to individuals, introspective accounts, did exhibit similarities but also described a great deal of difference in terms of the experience of feeling and emotion. The descriptions of feelings and emotions did not fall into neat, identical descriptions from which psychologists could present universal laws.

These differences could perhaps be ironed out, it was argued, if the experimental situation was even more tightly controlled. John Paul Nafe (1888-1970), working under Titchener at Cornell University, attempted to address the lack of consensus in introspective accounts by addressing what he saw as the reason for it - the over stimulation of the observer. The feelings induced during experiments were so overwhelming, he argued, that observation could not concurrently take place. He stated, "We thought we found that most experimenters upon affection had made their observers feelers rather than observers of feeling. They had tried, very naturally, to arouse strong feelings; and by this natural endeavour had, nevertheless, defeated their own object" (p. 508). The issue with introspection of feeling or of emotion was that paradoxically the emotion was too often getting in the way of the observation and detached accounts that described the same kinds of qualities or elements were not possible. To address this Nafe and his colleagues toned down the emotional tenor of the experimental situation,

We decided to employ simple stimuli of moderate intensity, such as might be expected to set up affective qualities of moderate intensity, which the observer should then observe and describe as equably as he had been accustomed to observe and describe sensory qualities. Feeling must be aroused,- but feeling as existential process, not as referred emotion. (Nafe, 1924, p. 508)

This is perhaps, what Titchener had described as 'pure' emotion. An emotion which is untainted by emotionality. Essentially the mental experience without the physical. What Nafe found, was a consensual describing of the experience of stimuli in quite similar ways. He found observers, consistently, described the unpleasant stimuli as a "dull pressure", the pleasant as a "bright pressure". However, when Young (1927) decided to test these findings by replicating the experiments using other observers, the

results were very different. He argued that Nafe's consensual results were merely as a consequence of the training and indoctrination of the observers. Observers had been exposed to Titchener's (1920) touch pyramid in which the terms they used had been initially exhibited. Young concluded, "It is my belief that...through the control of training one can demonstrate, with apparently equal validity, results which are logically incompatible" (p. 188). The result of such a controlled approach was to achieve consensus but at the expense of destroying the real experience of emotion.

This section has described three particular issues for structuralists' understandings of emotion. It has described how there continued to be a lack of consensus between introspective accounts despite the increased controls on the way in which these were conducted. It has also shown that if a common language was used consensus could be found, however, this was meant that descriptions of emotion moved away from the ways in which they were commonly understood to being an artefact of the laboratory.

5.4 Conclusion

As was shown in Chapter Three, accounts of emotion via introspection had always been highly idiosyncratic and individual. The structuralists, however, had tried to manufacture consensual accounts by making their descriptions concrete, bounded and definable. The strict training and controls that were put in place to produce results which could be compared would, Titchener had hoped, provide the kind of introspection in which consensus was possible. Indeed, if these were directed enough, as has been shown in Nafe's (1924) experiment, they *could* result in the concurrence of observers' accounts. In comparison to the often diverse accounts produced previously, in some instances at least, this way of conducting introspection appeared to offer psychology with a scientific version which could systematically highlight the similarities, rather than the differences.

Underlying this project was the idea that objectivity was possible. Introspection *could*, if controlled enough, produce consistent and sufficiently detached accounts of

subjective experience on which scientific understanding could be built. Perhaps for the study of the unemotional elements of the mind it could. However, it was found, rather, that there was something peculiar to feeling and emotion which was always going to be difficult to capture scientifically. Bentley (1924) described this elusive characteristic of the emotions in *The Field of Psychology*,

They are never 'blocked in'; they never are localized or 'placed' with respect to the qualities already described. They have been likened to the haze upon the mountains, the mist spread throughout the valleys and the varnish or sizing upon the painting. They 'tone' but they do not 'inhabit' experience. (p. 90)

Psychologists, in attempting to make concrete and describable and consensual that which was ephemeral, intangible and idiosyncratic found that their descriptions simply became an artefact of the experimental process.

Therefore, although the structuralists had attempted to control the subjective experiences produced during introspection about emotion, it was clear that it was still going to be extremely difficult to get these to tie in with each other without actually putting words in observers' mouths. The inability of systematic experimental introspection to produce consensual descriptions on which the understanding of emotion could be founded and progress, meant that as a scientific method its days were numbered. Margaret Washburn argued, however, that these differences were not really an issue, merely that they reflected different experiences of theorists. Reflecting in 1917 on the *Last quarter century of psychology* she stated.

Why should we not recognise that conflicting descriptions of the same experience, on the part of trained introspectors are each of equal value and authority; and simply mean that the experience in question really differs in different minds? Why not, instead of arguing that 'imageless thoughts'⁴³, for instance, mean that their possessor does not know how to introspect, and that if he did he would be able to identify their sensation components, admit that real individual differences between minds may be the basis of these differences of opinion? The differences of opinion would then, instead of delaying the progress of science serve as valuable scientific material. (Washburn, 1917, p. 55)

⁴³ This refers to the 'imageless thought' controversy between Titchener and the Wurzburg school. See, for example, Woodworth (1915).

What Washburn argued was that differences of opinion reflected the sense that psychologists did not always experience emotions in exactly the same way, rather than these differences being an indicator that the method was not being carried out correctly. This should not be viewed as a problem in psychology, rather as a truism and something which could be used to establish a more thorough account of emotion.

The chapter which follows will discuss the criticisms aimed at the method of introspection in the early twentieth century and will present the defence of the method by those such as Washburn who argued that it was a necessary tool in the investigation of the human mind. It will describe how, despite the criticisms aimed at it, it continued to be used to investigate the subjective experience of emotion towards the end of this period, although moving away from the form advocated by Titchener and the structuralists.

CHAPTER 6

CHANGES TO THE INTROSPECTIVE STUDY OF EMOTION 1900-1930

The purpose of this chapter is to look at the reasons why the method of introspection came under particular scrutiny at the beginning of the twentieth century, and, despite the criticisms aimed at it, continued to be used by some psychologists to understand and to develop the idea of emotion as a subjective experience. It describes how the debate over the retention of introspection centered around differences as to what the subject-matter of a scientific psychology should be – whether experience or behaviour. It seeks to reveal the scientific assumptions that were at the heart of the criticisms and to describe the defences that were put up for the need for introspection to be used to study the mind in a psychological science. It shows that, despite the arguments against its scientific efficacy, introspection continued to be used in psychology to describe emotion as an experience, both implicitly and explicitly.

6.1 Introduction

Titchener's efforts to drive forward a program of “systematic experimental introspection” at Cornell was set against a backdrop of debate as to the efficacy of the method. Although the use of introspection had survived the criticism of Comte in the nineteenth century and had come to be widely accepted as a necessary part of psychological theorising (e.g. Bain, 1873; James, 1890a; Ward, 1883) there had been an underlying concern in psychology as to its effectiveness as a scientific method (e.g. Caldwell, 1899; Hall, 1897; Mellone, 1896). Titchener's determination to regulate it as a means to produce consistent results had not been convincing and its association with philosophy meant that, during the first decade of the twentieth century, an increasing number of psychologists, tried to distance themselves from it and to claim

that objective methods were of far greater use in understanding human nature. This chapter will evaluate this period of debate in psychology's history in order to determine what happened to introspection, and with it the subjective experience of emotion, as a result of these epistemological and methodological challenges. It will show that there were attempts to remove it entirely as a tool of psychological research. However, it will also demonstrate, as Brock (2013) has described, that it was retained in an altered fashion by many psychologists, rather than disappearing altogether as some historians have claimed and will argue, that it became, rather, a peripheral and implicit, rather than the central and explicit, method of psychological research that it had been previously. As Brock describes, there is a narrative in the history of psychology that introspection disappeared entirely from psychological theorising with the advent of behaviourism at this time. This chapter will describe, rather, how the psychologist's subjective experience of emotion through introspection continued to inform psychological theories and to direct research.

In Britain and the US, from 1912 onwards, there was a distinct rise in the number of articles published about introspection that debated its flaws and its merits. Ruckmich (1916)⁴⁴, writing in relation to the academic wrangling of the time, described the reason for the turmoil as due to psychology not being regarded in the same light as other sciences because of its adherence to the method. He reported that it had been stated in the *American Journal of Psychology* that “psychology, after twenty-five years of growth, does not stand very high on the honor roll among other academic subjects” (p. 110). The fear that psychology might never be accepted as a science was, therefore, driving many psychologists to rethink the methods that were employed in the discipline. The result was that the psychology of the early twentieth century, particularly in the US, was characterised by argument and debate as to the future of introspection (Dunlap, 1912; Jones, 1915). Although this period was one of upheaval for the discipline, it was argued by some that it was necessary that psychology go through this refining process in order that it was brought in line with the natural sciences (Dodge, 1912; Jones, 1915). Jones, for example, argued for the necessity of

⁴⁴ Christian Ruckmich was to later publish under the name of Ruckmick and will be referred to by this latter name in other parts of the thesis

this time of reflection for psychology,

The period of detailed research is...temporarily succeeded by one of more general criticism, when foundations are examined and, to a greater or less extent, relaid. Physics, chemistry, and biology have been tested in this manner, and have emerged stronger for the trial. The time is apparently at hand when psychology must undergo the same process; and it seems the opinion alike of proponents of the classic method, and of its critics, that, whatever the issue, such a proving can hardly fail to be beneficial to the subject. (1915, p. 463)

For this reason, while J. B. Watson is often highlighted in historical analyses as *the* main critic of introspection, and Titchener the defender, the debate, as the following sections will describe, was not as narrow as simply Watson versus Titchener. The contributions to the debate came from many different quarters and from both psychology and philosophy. In reviewing the issues in psychology that characterised the year 1912, Buchener (1913) stated, “The particular interests of the year have been in the nature of critical reactions towards some of the work of former years. These have been most marked in the attacks on introspection, as a psychological method” (p. 3). The contents of psychology journals of the early twentieth century were littered with papers entitled, for example, *The case against introspection*, *Theory and limitations of introspection* and *What is introspection?*. The arguments on both sides of the debate were wide-ranging, addressing, for example, the nature of the act of introspection; the usefulness of the data it produced; and the nature of its subject matter of consciousness or experience. As Lyons (1986) explains, this was a period in which psychologists and philosophers came to a more precise understanding of what introspection was. For the first time in psychology’s history, they were forced to defend what it was they were doing when they introspected.

One reason for the criticisms stemmed from the changing focus of much psychological research and the different branches of psychology that had grown in response to the acceptance of evolution and physiology as forms of psychological knowledge, particularly in the United States. Therefore, it was felt that the assumptions of scientific psychology must alter in response. By the 1930s, as described by Heidbreder (1933), there was a breadth of psychological theorising that did not necessarily fall into strict structuralist and functionalist divisions. Experimental programs which used subjects rather than trained observers were beginning to be set up, because of the work

of those who were interested in, for example, individual differences, reaction times or memory span (Danziger, 1990). Further, the development of the various branches of psychology, such as developmental, comparative and dynamic psychologies, meant that many researchers working in psychological laboratories were not interested in studying the contents of consciousness or of producing lists of descriptions of ever smaller elements of the mind and they were no longer using introspection in their work. Cattell (1904), for example, was to state,

It seems to me that most of the research work that has been done by me or in my laboratory is nearly as independent of introspection as work in physics or in zoology. The time of mental processes, the accuracy of perception and movement, the range of consciousness, fatigue and practise, the motor accompaniments of thought, memory, the association of ideas, the perception of space, color-vision, preferences, judgments, individual differences, the behavior of animals and of children, these and other topics I have investigated without requiring the slightest introspection on the part of the subject or undertaking such on my own part during the course of the experiments. It is usually no more necessary for the subject to be a psychologist than it is for the vivisected frog to be a physiologist. (p. 181)

A great deal of comparative work, also, was being carried out on the physiology and behaviour of animals. Begun in the late nineteenth century by theorists such as George Romanes in an attempt to connect animal and human consciousness, this was seen as being increasingly important for the understanding of behaviour of human beings, given that evolution had established a physiological, if not necessarily psychological, continuum. However, because animal minds were not accessible to psychologists, those who studied the behaviour of animals began to be increasingly frustrated that this kind of research was not viewed as being useful to psychology because psychology was understood to be only the study of the mind (Watson, 1913). Those involved in this work in particular began to call for a change to the accepted remit and methods of academic psychology.

As has been well documented, the most prominent advocate of methodological change in psychology was the behaviourist, J.B. Watson (1878-1958). Lyons (1986) explains that behaviourists felt that their success in observing and measuring behavioural performance contrasted with what they perceived as the lack of achievement of introspective psychology. Watson, therefore, was not afraid of tackling head on both

the traditional understandings of psychology. Indeed he directly criticised both structuralism and functionalism and, famously, debated directly with William McDougall in 1924 in what became known as *The Battle for Behaviorism*. Watson's work in comparative psychology had given him an understanding of what psychological knowledge could look like without *consciousness* and, as will be described, his arguments against the use of introspection were determined by his denial of the need for psychologists to study the phenomenon at all. Watson, in contrast to Titchener, believed that psychology was to be practical and useful, and he argued that an applied behavioural psychology would be beneficial in tackling some of society's problems. This was probably the primary driver behind the rejection of the study of mind according to Brock (2013). Brock argues that the emergence in the US of the applied fields of psychology, such as clinical, educational and consumer psychology were the result of little public funding being allocated to research so that there was a need to produce data that could be utilised in these areas in order to make money. Focusing on behaviour change and learning, rather than descriptions of mental elements, could make psychological knowledge more saleable.

It was not only behaviourists, however, who argued against the use of introspection as the structuralists used it. Another significant and influential movement, Gestalt psychology was on the rise in Germany, its premise being that the mind should not be atomised in the way in which Titchener and his colleagues advocated and as their predecessors the associationists, had done. It was rather that the mind should be viewed as a whole and studied as such (Koffka, 1924). This was an important critique. The Gestaltists did not reject introspection as such or, more correctly, did not dismiss the study of subjective experience. Indeed, their work was focused on understanding phenomenology and the development of the method of phenomenological observation formed part of their work. Their work in the study of wholes, rather than parts of a whole, was a backlash against the elemental nature of structural psychology. As Flügel (1933/1964, p. 213) states, "Configurationism was a revolt against the excessive appeal to the classical principle of association and the elementarism to which this had given rise". Further, although not centre stage in the discussions of introspection but in the background, was the development of the idea of the unconscious mind in Freud's psychoanalytic theories. Although its use as a counter-argument was not particularly

well developed in the work of the experimentalists, it was a thesis which objectors to introspection were at times happy to draw on to develop their arguments (e.g. Dodge, 1912).

Meanwhile, the psychological study of emotion, continued to be viewed during this time as being in something of a state of disarray. Chapter Five has described the difficulties faced by the structuralists in studying emotion. Debates about particular theories and some experimentation continued in other branches of psychology, but there seemed to be little scientific progress. James's theory dominated the debate on emotion even up to the late 1920s, but it was viewed by many as having pushed the direction of discussion somewhat off course (Bentley, 1928). The work by Cannon (1914) demonstrating the lack of physiological difference between fear and anger had enflamed more scepticism towards James's theory than it had already elicited. Further, the different branches of psychology were using the term *emotion* but with seemingly different meanings, prompting the following comment from Bentley, at the first Symposium of Feelings and Emotions, held at Wittenberg, Ohio, in 1928,

But whether emotion is today more than the heading of a chapter, I am still doubtful. Whether the term stands – in the regard of most of us – for a psychological entity upon which we are all researching, I do not know. Whether it is the common subject of our varied investigations, I am not sure enough to be dogmatic. (p. 23)

The uncertainty expressed by Bentley reflected the particular difficulties that the study of emotion had always evoked in psychology. That there was, despite what seemed to be a universal understanding of the term in an everyday sense, a great deal of subjective difference between psychologists, both in terms of what that word meant and as to how it could or should be defined scientifically. As has been shown in the work of introspectionist psychologists, consensus even amongst those purporting to use the same method was hard to come by. The changes to introspection which took place at this time, as will be described, had a profound effect on the explicit use of the psychologists own subjective experience as a part of psychological theorising about emotion and there was a continued denigration of that view of emotion, even if some psychologists argued that it was still what emotion was and emotional behaviour could not be understood without it. This chapter will first describe the arguments aimed

against introspection during this time and then how it was defended. This will show that, although there was a strong case for its rejection, it was difficult even for behaviourists to reject its use entirely. The chapter will then go on to describe how it was retained as a means to conduct pre-experimental exploration and analysis and will outline how it continued to be used in the study of emotion.

6.2 Arguments against introspection

Psychology as the behaviorist views it is a purely objective experimental branch of natural science...Introspection forms no essential part of its methods nor is the scientific value of data dependent on the readiness with which they lend themselves to interpretation in terms of consciousness. (Watson, 1913, p. 158)

This section will describe the arguments put forward against introspection in some detail. It will show that these were related to the desire to produce psychological knowledge that was consistent, replicable and universally applicable and a drive towards the development of a psychological science that was able to produce theories which showed consistent patterns of cause and effect. Although, J. B. Watson's critique will be at the centre of the examination in the chapter, it will also, encompass the many critiques of introspection written by other theorists at the time. Five particular points that were put forward as objections to the method will be discussed. First, that the study of consciousness was not suitable subject-matter for scientific investigation; second, that introspection as a method was unable to produce reliable and replicable data; third, that there were some aspects of human psychology that introspection was unable to address and fourth, that the over-reliance of psychologists on introspection placed a barrier between the flow of ideas between psychology and the natural sciences. Finally, the arguments of some behaviourists that both consciousness and introspection could be reduced to physiological and behavioural data will be described.

One of the most contentious points was over the question of the suitability of

consciousness or experience as scientific subject-matter. Titchener's position was, of course, that psychologists should be studying consciousness and its contents and attempting to delineate it into different elements, and that introspection was the means by which they achieved this. In the work of both structuralists and functionalists, even when other kinds of data, such as physiological measurements and behavioural observations were accepted as appropriate for a scientific psychology to use as data, there was a tendency for these to be used solely for what they could say about consciousness rather than what they could contribute to broader knowledge about human behaviour (Flügel, 1933/1964). However, as the US philosopher A.H. Jones (1915) described, there was a growing academic debate at the time as to whether psychologists should or could study consciousness or if consciousness existed at all. In an article analysing psychological methods, he stated, that this period was one in which a 'flood of articles' presented a debate that,

centers...on the rôle that consciousness should play in the science. Is consciousness the subject-matter of the discipline – must its interpretations be cast in terms of awareness? Or should psychology turn from the subject's experience altogether and concern itself only with stimulus and reaction, with "behavior"? (p. 463)

There had long been a question as to the existence of consciousness as a psychological object or at least an uncertainty as to whether there was anything that could be introspectively observed that should be given that term. Even some psychologists who were advocates of introspective psychology had argued against the use of the concept of consciousness and deemed it unnecessary for psychological theorising. Indeed Bain (1859; 1865) had at first included a section on consciousness in the first edition of *The Emotions* but had erased it from later editions. James (1904) was very much against the use of the concept, stating,

"consciousness"...is the name of a non-entity, and has no right to a place among first principles. Those who still cling to it are clinging to a mere echo, the faint rumor left behind by the disappearing "soul", upon the air of philosophy...for thirty years past I have mistrusted "consciousness" as an entity, for seven, or eight years past I have suggested its non-existence to my students, and tried to give them its pragmatic equivalent in realities of experience. It seems to me that the hour is ripe for it to be openly and universally discarded. (p. 477)

James, however, as can be seen from the quote above, argued for the retention of introspection as the study of *experience*. This argument was also put forward by McDougall (1929), also, as will be described below.

Some behaviourists were, in contrast, intent on doing away with any kind of phenomena in psychology which could not be physically observed, measured or from which it was hard to find a relation of cause and effect. There were two main arguments made against the study of consciousness in psychology. First, that, although it might exist, it could not be studied scientifically, therefore, it should be ignored by psychologists and, secondly, that it was simply an epiphenomenon which arose as a result of physiological processes and responses and therefore did not exist as an entity in its own right and had therefore no place as an object of study (Lashley, 1923a). Watson (1913) argued initially for the first and then later for the second. Watson, like James, contended, that consciousness was merely a term that denoted the, now discarded, concept of the soul. “All that Wundt and his students really accomplished”, he argued, “was to substitute for the word "soul" the word "consciousness"” (Watson, 1929, p. 14). Comparative psychologists, he stated, had initially looked for consciousness in their studies, because it was such an intrinsic aspect of psychology. They had even found alternative concepts for it, such as “associative memory” (Watson, 1913, p. 160). However, Watson had come to the conclusion that this had been essentially an anthropomorphic approach and that there was no evidence in his work for such a concept. Behaviour, Watson argued, should be studied not because of what it could say about consciousness but for its own sake. Initially, he stated, that the terms used by psychologists - consciousness, image, affection and will - were “in good repute”. However, he had found later on that he could “get along without them” (Watson, 1919, p. viii).

The behaviourists had studied the behaviour of animals without having access to their consciousness and argued that they had made great strides in the understanding of both animals and humans without it. By 1924, the year in which he debated with McDougall over the future of psychology, Watson had become increasingly dismissive of its existence, stating that “it has never been seen, touched, smelled, tasted or moved...they do not tell us what consciousness is, but merely begin to put things into it by assumption, and then when they come to analyse consciousness, naturally they

find in it just what they put into it.” (1929, p. 14). In studying something that could not be viewed, he argued, psychologists had failed to produce coherent and consistent data in the way that the observation of the physical world could do,

In other words, instead of gazing at woods and trees and brooks and things, we must gaze at this undefined and undefinable something we call consciousness. As a result of this major assumption that there is such a thing as consciousness, and that we can analyze it by introspection, we find as many analyses as there are individual psychologists. There is no element of control. There is no way of experimentally attacking and solving psychological problems and standardizing methods. (Watson, 1929, p. 16)

Edward Tolman (1886-1959), one of Watson's fellow behaviourists, also described what he saw as an incongruity between a discipline striving to be accepted as a science and its study of “elements which by very definition are said to be private and non-communable” (Tolman, 1922, p. 44). The results of introspection for many behaviourists, therefore, were not scientific discoveries but artefacts of an out-dated psychological concept. As psychology progressed it should, they argued, leave behind notions which could now be regarded as the error of a new science. Psychology could develop when consciousness was rejected as a scientific concept.

The second reason that introspection came under attack, therefore, was that some scientific psychologists felt that it had not produced stable and replicable results. Many psychologists during this period, even those who supported the method, were concerned with what they saw as its unreliability, particularly in relation to the way the structuralists used it. British psychologist and founder of the BPS, Charles Myers (1873-1946), was to make the point that the outputs of systematic experimental psychology were abstractions of psychological phenomena, rather than real experiences (Myers, 1925). Further, it was argued that these abstractions were not sufficient as an aid to understanding the mental states it was claimed they represented. Years of psychological theorising using introspection as a method, Watson (1913) said, had failed to produce consistent and universal results. Watson, unlike Comte, was in the position of being able to present his argument against introspection from the standpoint of a review of the results of fifty years of introspective scientific psychology. He had, therefore, at his disposal, fuel to add to the arguments about the perceived scientific unreliability of the method. It was, as has been described, widely

acknowledged in psychology that there had indeed been a struggle to reconcile psychologists' introspective reports (Washburn, 1917) and from what he had seen, Watson believed that if psychology was to continue to use introspection as its method, psychologists would be forever going round in circles, lost in unresolvable disputes over whether, for example, "the auditory sensations have the quality of "extension" or "whether intensity is an attribute which can be applied to color"(Watson, 1913, p. 164). Psychology, he argued, was overly reliant on a method that produced inconsistent and unverifiable results and from which no determinable and demonstrable data could be generated.

Watson's was not a lone critical voice in this respect. Raymond Dodge (1871-1942), professor at Wesleyan University and later the editor of the *Journal of Experimental Psychology*, had written a widely cited paper *The theory and limitations of introspection* which questioned the reliability of the method and argued that it needed to be looked at carefully if psychology was to flourish as a science (Dodge, 1912). Introspection as the study of the mind of the psychologist was not only subject to differences between psychologists, he argued, but it was subject also to change over time, "Even the fundamental categories of consciousness change with the years, while new and previously totally unsuspected facts may be readily introspected as soon as there is theoretical ground for belief that they exist" (p. 227). Although he did not agree that it should be done away with entirely, Dodge argued that the dogmatic approach of the structuralists caused the rejection of the inclusion of many other, much needed aspects of the study of the human mind, in psychology. He expressed surprise that, a great deal of care was taken over the techniques used in psychophysical experiments and the calibration and reliability of the instruments, while, in contrast, this unreliable method had been given the place that it had.

Thirdly, it was argued that there were some aspects of psychology that introspection could not address. The "imageless thought" controversy, in which there was a disagreement amongst introspectionists in both Germany and the US as to whether people could think without reference to mental imagery, had thrown up a question as to whether introspection could capture all mental states (Dodge, 1912). Dodge questioned the belief that introspection was the only method of psychology that could be used to tackle all subjects related to the human mind. In reality, he argued, there

were some issues that introspection appeared unable to address; the unconscious being one of them. “The sub-conscious, the elements of consciousness, the processes of their integration, and the residua of past experience differ”, he stated, “from consciousness in one very significant fact, that they are not describable in terms of introspective categories, except negatively” (p. 226). Karl Lashley, (1890-1958), one of Watson’s fellow behaviourists, too emphasised how the modern phenomena of the unconscious called into question both the reliability and usefulness of introspection in psychological investigations, “In modern psychology, with its hierarchies of the subconscious, the dividing line between the conscious and unconscious has ceased to exist” (1923b, p. 341).

If its critics saw introspection as being unable to provide answers to certain questions about the mind, it was certainly, also viewed as being an insufficient method by which to answer the particular questions that behaviourists were asking about human nature. Its use by psychologists, the behaviourists argued, restricted the scope of psychological knowledge and, further, the potential to make discoveries through the observation of human behaviour. Lashley having studied the contents of a typical psychology textbook of the time discovered that what he saw as the interests of behaviourism were not represented.

The behaviorist is interested to discover the wells of human action: how does the individual meet the complex situations in which he finds himself, how solve his problems, how acquire social conventions, whence come his interests, prejudices, ambitions, what is the source of his genius or commonplaceness? These are not the problems of the introspectionist, yet they are unquestionably psychological problems, and their importance is far from measured by the grudging five per cent, granted them in the text. Only a vision grown myopic by long introversion could behold sensory physiology as twelve times more important than all the problems of human personality combined. (1923b, p. 348)

Fourthly, the perceived limitations of introspective psychology were also connected to another argument against the method, that its use was causing a growing distance between psychology and the other sciences. Dodge (1912) described, for example, how introspective analyses and accounts did not seem to relate well to physiology and medicine but that they seemed, rather, to place psychology in quite an uncomfortable

epistemological position in relation to these disciplines. S.C. Pepper (1918), the US philosopher, writing in the *American Journal of Psychology*, described a situation where, because of its focus on “internality”, psychology, had become adrift from those sciences which studied “externality” (p. 208). He argued that this had happened because of structuralism’s assumption of psycho-physical parallelism that described the body and mind as separate entities that existed alongside each other but did not impact on each other. Thus, some psychologists felt that the structuralists were so caught up in the introspective method and the study of consciousness that physiological data, which had previously proved useful as a means to connect psychology to the natural sciences, was being seen to be increasingly irrelevant to their discipline,

The only legitimated functions of experiment are either to provide suitable conditions for introspection, or objectively to lead to the presumption that adequate introspection of the subject would reveal something. Failure to introspect condemns an investigation to the outer darkness of physiology. Facts of nervous action may be interesting or even suggestive but "psychology better take them from the physiologist". In public conference not long ago it was seriously questioned whether titles in nervous anatomy and physiology couldn't well be omitted from the Psychological Index. (Pepper, 1918, p. 217)

There was a fear, therefore, that psychology was becoming increasingly distant from the sciences of physiology and anatomy. These theorists argued that this distance was in danger of impacting detrimentally on psychology, for two main reasons. First, as described in Chapter Three, because the data of these sciences, which psychologists had used previously as a supplement to introspection and as a means present measurable and universal patterns of cause and effect, were being lost (Pepper, 1918). Second, connections with these sciences enabled psychology, in its infancy, to be taken seriously as a science. If that connection was lost, there was a danger that, having fought against such criticisms in the past, psychology would succumb to the arguments of the positivists that it was a pseudo science interested only in the unfathomable *consciousness*. Albert Weiss (1879-1931), another behavioural psychologist, argued that the results of psychology needed to be able to be integrated with the results of physics, chemistry and biology, if it was to take up its place in the “system of natural sciences” and that it could do so “without losing what the introspective method has to

contribute” (Weiss, 1928. p. 172).

Finally, behaviourists argued that introspection was unnecessary to psychology because physiological and behavioural methods were sufficient to explain the way in which even introspection and consciousness themselves arose. For many behaviourists the study of consciousness could quickly be done away with once the behaviourist paradigm was the accepted method of psychology because it would, they argued, be shown that all human action could be explained by an eliciting stimulus and the resultant physiological and behavioural reaction. They could even describe introspection itself in simple behavioural and physiological terms (e.g. Lashley, 1923b; Watson, 1920; Weiss, 1917). The behaviour of self-reflection, the behaviourists contended, was exactly the same as the action of speech. The former simply lacked the employment of the larynx and the mouth. Weiss, for example, was to argue that, 'For the behaviorist the introspective reaction is only the habit of being able to react by speech, more or less adventitiously, to the weak stimulation of obscure receptors.' (p. 316). This theory was found to be difficult to verify empirically (Flügel, 1933/1964) and was argued to have little value in explaining the psychological processes of introspection (Washburn, 1922).

Given that it was difficult merely to dismiss concepts such as consciousness which had been so much a part of the founding of psychological thought, if such an account was verified then psychology could carry on with a behaviourist program safe in the knowledge that it was capable of showing how this particular psychological phenomenon arose. Lashley (1923a), a former student of Watson's, stated, "A behaviorism will thus develop which will be an adequate substitute for the older psychology. Its physiological account of behavior will also be a complete and adequate account of all the phenomena of consciousness" (p. 244). Tolman (1922) similarly argued that it was entirely possible that behaviourism, rather than avoiding the issue, could explain the existence of the epiphenomenon of consciousness and of the self-observation that took place in introspection. He stated "Such a non-physiological behaviorism seems to be capable of covering not only behaviorism proper but introspectionism as well. For, if there are any such things as private mental 'feels' they are never revealed to us (even in introspection). All that is revealed are potentialities for behavior" (p. 53).

These criticisms of consciousness and introspection were an attempt to alter the methodological and epistemological position of psychology. They were based on a drive for prediction, rather than description and if there was one thing that introspection had demonstrated it was that if the subjective experience was difficult to describe, it was even harder to predict. However, as much as introspection's critics made attempts at discrediting it there were many defenders, like Washburn and McDougall, who argued against the criticisms. For them human experience, however messy and difficult to pin down, was a necessary test of the veracity of scientific theories. For this reason, as much as there were psychologists who could not see a future for psychology if introspection continued to be its method, there were as many who could not see a future for it without introspection. The following section will describe how introspection's advocates defended introspection in the face of such attacks.

6.3 Defence of introspection

This section will show how, despite the difficulties described as to its place in a discipline purporting to be scientific, introspection was stoutly defended as being a necessary part of psychological theorising, without which the human mind or human behaviour for that matter could not be fully understood. This defence was especially important to the continued understanding of emotion as a complex and idiosyncratic subjective experience and, indeed, as will be described, it was often emotion that was called on as an example of why the study of behaviour and physiology alone would leave out something fundamental about human nature.

As the following account of the defence of introspection during this period will describe, the arguments as to the rejection of introspection were far from clear cut even in the work of the behaviourists. Watson was to argue that introspection had no place in psychology. However, other psychologists did not follow his lead in doing so, despite reservations about Titchener's use of introspection. They found ways of continuing to incorporate it into their own understandings of psychology. They also

specified that psychology was not simply the study of the mind but also of behaviour (e.g. Laird, 1919; McDougall, 1929; Pillsbury, 1911;). Many of these psychologists could not reject it in the way that Watson had done because they argued that without it their research into human behaviour lacked meaning. They also felt, however, that the objective study of behaviour had been given second place to that of the subjective for too long and the balance needed to be addressed. The defence of introspection can be divided into three main themes. First, was Titchener's assertion that introspection was to remain as the only method by which psychological experimentation could be conducted and that psychology could not survive without it. Secondly, was a more inclusive note, mostly from functionalists, who believed that observation of behaviour was as important as introspection; although that did not mean that the latter should be discarded. W.B. Pillsbury (1872-1960), a former student of Titchener's, for example, argued in the *Essentials of Psychology*, that, "Even if we regard the understanding of human behaviour as the ultimate end of psychology, consciousness must still play a very important part in our science" (1913, p. 4). Thirdly, there were some psychologists who argued that introspection was sufficient, but that its usefulness depended on it altering from the role that it currently played in structural psychology to be used more broadly. This section will examine each of these proposals in turn.

In presenting his argument in defence of the use of introspection, Titchener (1912a), in *Prolegomena to a study of introspection*, cited the greats of psychology as the advocates of the method – James, Munsterberg, Ward, Sully, Binet, Ribot – showing the tradition and general acceptance that it had in psychology. He went on to argue that psychology would not exist if it had not been for the use of introspection,

It is maintained that, were introspection impossible, we might still have a science of 'psychology,' a system of observations and inferences which could not be subsumed to any existing science. This assertion cannot, so far as I see, logically be gainsaid, though one may doubt whether in fact the 'psychology' would have arisen. (p. 431)

Introspection could not just be tossed aside lightly – it had, from his point of view, been the backbone of the development of psychological thought and without it scientific psychology could not exist. Titchener (1914b), defended his view in response to Watson's arguments, but welcomed the behaviourist's methods of study

and their usefulness. He also maintained his position on what psychology was. He argued that Watson's rejection of consciousness must, in fact, be a result of a mistaken understanding of what the term referred to,

Harm begins at once when we forget that scientific meaning, and start out from the commonsense or traditional significance of the word; when we equate "mind" with "consciousness," which we take as the equivalent of "awareness," and when we set off a group of "conscious phenomena" as the peculiar subject-matter of psychology...But habits of speech are inveterate, and common sense is extraordinarily tenacious of life: small wonder, then, that misunderstandings should arise. It is, for example, a misunderstanding that has prompted the polemical paragraphs of Watson's recent articles on what, I suppose, we must be content to call Behaviorism. (p. 2)

Titchener believed that psychology could not be anything other than the study of the mind as shown in the individual human experience. That did not mean that it was any less scientific than physics and chemistry, merely that its subject matter was, rightly, different. Although, Titchener did not believe that behaviourism was psychology, he did not think that observation of behaviour in humans should not be done, only that, "Neither logically nor materially can behaviorism "replace" psychology" (1914b, p. 6).

He was not alone in his defence of the method of introspection as being the only means by which psychology could progress. John Laird (1887-1946), the Scottish realist philosopher, for example, suggested that the arguments aimed against introspection appeared to be more to do with the personal "taste and aspirations" of particular psychologists and where their aspirations lay than on any empirical or evidential basis (Laird, 1919, p. 26). The background that the behaviourists had in comparative psychology meant, he argued, that their goals were naturally different and that they focused on aspects of human nature that reflected the area in which they were interested. In Laird's opinion, "Comparative psychologists prefer to keep to methods, and to study human behaviour in the same way as animal response, in order that their measurements and statistics may be strictly comparable" (p. 385). Thus he argued, that the objections of behaviourists to introspection were nothing more than an argument made for one way of conducting scientific inquiry over another and did not indicate that psychologists should reject introspection as a scientific method.

Similarly, Washburn (1917, p. 51) was to argue that the attacks assumed “the personal interest” of the psychologists who were making them rather than arguments which held any water and that these assertions by behaviourists about introspection were based on what they believed a science should look like. For Washburn, however, psychology was not the same as other sciences. In defending the method, she went on to describe in detail what the development of objective knowledge in psychology owed to introspection as a subjective method,

It was only through introspection that we discovered the fallacy of the assumption that when the observer is required to react after discriminating one stimulus from another, the time of the act of discrimination can be found by subtracting ordinary reaction time from the total time....we have a witness to the importance of applying introspection to the process of sensory discrimination. (p. 52)

Introspection did not always produce replicable results but it could, nevertheless, provide valuable information which could enhance the understanding of psychological phenomena. These theorists argued that there would be a loss to psychology if psychologists abandoned introspection altogether. Reiterating the argument which had been made for introspection since the early days of psychology, Laird argued further, “But introspection is the only means of direct acquaintance with the mind” (p. 406). Psychology for many psychologists should remain the study of the mind for which introspection was necessary.

This argument was made in defence of introspection, also, in relation to the nature of scientific investigations. Science, as Titchener had long argued, was conducted through the observations and experiences of scientists and as such the workings of their consciousnesses were tools in the process of scientific study. Scientists in other disciplines observed the world outside of themselves, but psychologists were also attempting to examine more broadly the outer world with recourse to examining the inner world. Pepper (1918) defended introspection because it was only different from the 'objective' methods in terms of what it studied,

The introspective method will accept any kind of experiences whatsoever as fit material for its process, as fit data to be described. The objective method will accept only sensations derived from the exteroceptive sense organs, and prefers to accept only sensations derived from vision. Introspective method is

democratic and recognizes no innate fitness of data. Objective method is aristocratic and insists on the natural superiority of vision. Herein lies the whole distinction between the introspective and the objective methods. (p. 213)

It was through the eyes of scientists that scientific observations were made. Interpretations of evidence were conducted within the minds of scientists. For those who advocated introspection, its rejection meant that psychologists would no longer be in a position to examine the very tool, the mind, through which the world was analysed and described in science.

A second viewpoint was proposed which suggested that some middle ground between the structuralists and behaviourists could be found; it argued that both introspection and the observation of behaviour were *both* critical in understanding psychological phenomena. In 1911, for example, Walter Pillsbury, an advocate of the introspective method, defined psychology as “the science of human behaviour” (p. 1) and, in particular, psychologists who were interested not in the elements but the functions of the mind argued for the retention of introspection but not at the expense of ignoring behavioural data. As described in Chapter Three, William McDougall argued for a more limited role for introspection in psychology, in part because he saw it as inadequate in separating out the emotions from each other. However, in disagreeing with Watson about the future of psychology, he made two particular points; first that it was necessary to retain introspection in psychology but also that behavioural observation had been an important source of data for psychology for some time. In arguing the first point, McDougall (1929), like James, claimed that introspection was the study of experience rather than consciousness and in rejecting Watson's vision of a psychology void of the introspective method, he pointed out an absurdity in Watson's reasoning; that so much of human psychology would necessarily be excluded by the behaviourist's rejection of subjective experience as data. Watson (1929) had stated that the behaviourist, in rejecting anything that cannot be physically observed, had dropped “from his scientific vocabulary all subjective terms such as sensation, perception, image, desire, purpose, and even thinking and emotion as they were originally defined” (p. 17). McDougall joked about this claim of Watson's,

Now, though I am sorry for Dr. Watson, I mean to be entirely frank about his position. If he were an ordinary human being, I should feel obliged to exercise

a certain reserve, for fear of hurting his feelings. We all know that Dr. Watson has his feelings, like the rest of us. But I am at liberty to trample on his feelings in the most ruthless manner; for Dr. Watson has assured us (and it is the very essence of his peculiar doctrine) that he does not care a cent about feelings, whether his own or those of any other person. (p. 44)

The experience of the psychologist was, for those advocating introspection, a vital resource by which feelings and emotions could be understood. It seemed ridiculous, therefore, for Watson to reject the idea of emotion when he undoubtedly experienced emotions himself. This position was later echoed by Heidbreder (1933) in the statement, “Does a behaviorist mean, then, that a person cannot be aware of his own anger except my means of kymograph tracings or blood-analysis...by catching sight of his flushed face in the mirror...?” (p. 281). For R.B. Macdougall (1912), founder of the psychology lab at New York University, writing earlier in the century, the existence of human experience was not a fact that could ever be in doubt, “whether it concerns the psychologist's work or not, the uniqueness and exclusiveness of subjective immediacy in each individual experience is a fact to be recognized, not a theory to be discussed” (p. 393).

The second point William McDougall made in debating with Watson was that the study of behaviour had been an aspect of psychological theorising for some time, and the behaviourists were not alone in using behavioural methods. He had, he claimed, been the “chief begetter” of behaviourism (1929, p. 49). Human behaviour had been an aspect of his own work for many years – through the observation of infants and comparative psychology. McDougall (1910) had always advocated comparative psychology particularly in relation to the study of the emotions and their associated instincts. In arguing for the retention of introspection, therefore, he, like other functionalist psychologists, advocated a wider remit for psychology than either Titchener or Watson, calling the amalgamation of behaviourism and introspection a “sane Behaviorism”,

Thirdly, there is sane Behaviorism, or that kind of psychology which, while making use of all introspectively observable facts or data, does not neglect the observation of behavior, does not fail to make full use of all the facts which are the exclusive data of Watsonian Behaviorism. This same Behaviorism is the kind of psychology that is referred to approvingly, by many contemporary writers in other fields, as "Behavioristic Psychology. (p. 48)

For McDougall, the scientific study of human nature was a problematic endeavour and psychologists could not afford to reject a whole raft of data which had been gathered from the experiences of human beings. Similarly, there was a number of introspective psychologists, who, although not having developed their ideas in comparative psychology were, nevertheless, anxious that psychology should embrace the study of behaviour as the principal means of developing psychological knowledge. Many theorists believed there to be a middle ground which allowed for the presentation of a more rounded picture of human psychology. Jones (1915) stated that “Structuralism and behaviorism are thus hemispheres of the doctrine of mind which, though properly separated to meet the demands of an ambitious specialism, must yet be united if we are to have a fully rounded account of consciousness” (p. 471). They were anxious that as behavioural accounts were accepted as part of the remit of psychology, the study of the mind not be neglected. For example, H.C. Warren (1867-1934), a founder member of Titchener's *Society of Experimental Psychologists*, in 1919 described psychology as “the science which describes the mutual interrelation between an organism and its environment” (p. 13). This science, he suggested, was to develop, first through the observation of other people, and secondly, through the psychologist's use of introspection of subjective experience.

Thirdly, other psychologists arguing similarly for the use of behavioural data alongside the data of introspection also argued that this would be effective but only if the latter method moved away from the structuralists' understanding of it. Wheeler (1923), for example, stated “One does not discard a promising method because it yielded poor results for a time. On the contrary, he sets about to improve and if possible to perfect the method” (p. 105). Wheeler stated further that the quantitative data obtained from behaviourist experiments was inadequate to reveal all forms of human behaviour but that there was much that introspection could still contribute to psychology,

In summary, then, introspection should be used in connection with the gathering of behavioristic data for the two following reasons: (i) It provides information about the setting in which overt behavior takes place just as the physiologist provides his setting by resorting to anatomical information. Until behavior as a whole is studied, one can hardly call himself a behaviorist; and since man is consciously acting as well as making overt bodily movements, behavior as a whole is not studied until introspection is used as a supplementary method. (2) It provides the necessary checks on the reliability of data

'objectively' obtained. The radical behaviorist is unscientific in that he ignores known conditions and processes which influence and interpret the overt reactions to which he has arbitrarily confined himself. (p. 114)

Wheeler, therefore, advocated a different role for introspection in psychology; to both contextualise the study of behaviour and to make sure that behaviouristic data related to an internal event. As explained by Desilva (1930), one of the reasons why a behaviourist might be tempted not to reject consciousness entirely was that, when behaviour was observed experimentally, it was often found that differences in response to the stimulus between subjects suggested that there was more to the reasons behind people's behaviour than mere conditioning. Behaviorists were attempting to demonstrate the predictability of human behaviour, however, in many instances, it was noticeable that experimental results did not demonstrate the patterns that they had imagined they would. The theorists who wished to retain introspection argued that the information gleaned from introspection could help explain the reasons for this variability.

It was argued, also, that introspection should be retained but altered to describe experience but not detail the mental elements. For Knight Dunlap (1875-1949), a colleague of Watson's at John Hopkins University, the elements of the mind were not able to be observed by introspection but experience could be. Dunlap (1912), while arguing for the retention of self-reflection as a method, argued that introspectionists had not demonstrated that the mental states could be observed. As the observation of the observation of the outer world, introspection had become, rather, the description of the objects in the outer world rather than the inner. Because of this, psychologists were unable to avoid committing the stimulus-error,

In actual practice, most psychologists who use the term 'introspection' and define it as the observation of consciousness not only do not seek to apply it in strict accordance with the definition, but they even apply it to the whole range of psychological observation. In giving 'introspective reports' on the observation of a sound, for example, the sound itself is usually included as one of the 'introspected' details. So colors, odors, after-images, and all other objects of consciousness, are quite commonly said to be 'introspectively' observed. This practice constitutes effectively the *reductio ad absurdum* of the 'introspection' theory. Starting as a distinctive kind of observation, the observation of an observation of something, it finishes as the only kind of

observation. In other words, there would seem to be really nothing to observe except the observation of something else! (p. 412)

He did, however, argue for its retention as a tool in the study of feelings and emotions and other phenomena which occurred in the body because these were truly inner processes and experiences that were accessible to self-examination. He stated, “These facts are 'inner' in that they concern, or are constituents, of the body, or objective self. By a rather natural step, accordingly, these inner facts are taken to be the process of observing the sound. Observation of them is, therefore, the process of observing the process of observing the sound –*introspection*” (p. 411)

This section has described three arguments for the retention of introspection in some form and has demonstrated that there was still a great deal of support for the method as a scientific practice. It was argued first, that it should be retained in the structuralist form by Titchener; secondly, that it be used alongside behavioural observations and thirdly, that it be retained but altered from the forms that it currently took. Some of these defensive arguments were based on a belief that the study of subjective experience provided a check on behavioural data and, at times, an explanation for it. It has also been described that these arguments for introspection had particular salience for the study of emotion as a subjective experience. The following section will describe the extent to which introspection was retained in psychology, following this period of uncertainty, challenge and debate and at what forms it took, and at how it was used to study emotion.

6.4 The use of introspection to study emotion

6.4.1 The retention of introspective accounts in psychology

The defences made of introspection by psychologists, above, indicate that there was certainly no consensus in psychology as to the rejection of introspection, or of the

psychologist's subjective experience from psychological experimentation and theorising. However, they do show that there was a move to alter introspection from the form advocated by Titchener, and this is indeed what took place. This section will describe what happened to introspection. It will explain the demise of structuralist introspection, but the retention of introspective accounts of experience in other forms as a means to further psychological research and, in particular, for the understanding of emotion.

Systematic experimental introspection lasted up until Titchener's death in 1927. With its strongest advocate gone, it was unable to survive the changes that were taking place in psychology and gradually faded from use (Heidbreder, 1933). This form of introspection foundered on the arguments against its treatment of the mind and of the purpose of psychology, rather than against the method *per se*. It foundered, also, on the drive towards the elimination of the remnants of associationist philosophy on which structural experimental psychology had been established. As early as 1899, Caldwell, for example, had described the artificiality of the endeavour, and that what the structuralists' 'discoveries' consisted of were "artefacts, abstractions, usefully isolated for scientific ends, but not found in experience" (p. 188). As Lyons (1986) also claims of Titchener's method, "scientific introspective psychology... brought itself into disrepute...even if the concept made sense and the process was feasible, in fact, introspection proved to be an unreliable source of psychological data." (p. 21). Further, Heidbreder (1933), describes how Titchener's lack of willingness to embrace and widen his remit of psychology in the face of a great deal of opposition to his position, was also a factor in its demise. Titchener had achieved much in terms of legitimising psychology as a science in the US by steering psychology away from its philosophical roots towards experimentalism, but the narrowness of his endeavour was in the end its undoing. What this attempt at limiting introspection showed was that the method did not benefit from having scientific restrictions placed on it, but rather that these restrictions constituted a loss of one of its advantages; that of producing phenomenological descriptions of human experiences unrestricted by the artificiality of the assumptions of science.

However, although it is clear that Titchener's view of introspection disappeared⁴⁵, Watson's strong arguments against consciousness and introspection were undoubtedly not taken on board by all psychologists. After the debate around consciousness and introspection of the early twentieth century and the epistemological and methodological directions that psychology should take had receded, the landscape of psychology, while altered as a result, was not changed in the radical way that Watson had hoped for (Flügel, 1933/1964). Hunter (1925), a behaviourist himself, stated that, "Instead of two warring factions we have merely a collection of psychologists who vary more or less among themselves in their relative predilection for the methods of introspection and external observation" (p. 154). Heidebreder (1933) too pointed out that, "As a matter of fact, few psychologists call themselves behaviourists without qualification...As a consequence behavioristic psychology merges gradually into psychology in general and strange to say the result is not confusion" (p. 259). Heidebreder also describes the product of the rise of behaviourism, not as being the disappearance of introspection, but that "the results of introspection are less likely to stand alone; they are supplemented and supported by objective data" (p. 263).

Brock (2013), therefore, describes the interpretation in many histories of psychology of the disappearance of introspection in psychology as a "mythical account". He claims that introspection survived in several areas of psychology including psychophysics, Gestalt psychology and psychoanalysis. Costall (2006), too, states that introspection, as the examination of the psychologist's own subjective experience, survived in "a furtive way" (p. 650) in experimental psychology also, even in the form advocated by the behaviourists. This was what Boring called "camouflaged introspection". When writing a paper on *A History of Introspection* in 1953, he makes it evident that, not only that introspection had not disappeared from psychology but neither had the study of subjective experience,

If conscious experience can be said to exist, then the question arises as to whether modern psychology ought not to take into consideration its data, as indeed it used always to do. Thus my paper might even be called "What

⁴⁵ Although it could equally be argued that elements of what Titchener did continue to influence the study of emotion today – for example, the description of emotion in terms of a set number of characteristics (Lange *et al.*, 1997), attempting to induce emotions in the lab, experiential and introspective accounts from participants and attempts to define the structures of emotion (Izard, 2010).

Became of Introspection?" One common answer to that question would be that introspection was not viable and so gradually became extinct. Another answer, however, is that introspection is still with us, doing its business under various aliases, of which *verbal report* is one. The former statement about the failure of introspection is approximately true of that introspection which flourished under Titchener at Cornell in 1900-1920, whereas the latter statement about camouflaged introspection is accepted by the modern positivists who hold that the concept of conscious experience has meaning only when it is defined operationally. (p. 169)

Given that it is clear that introspection survived in some form, how then was introspection used at this time? The rest of this section will describe two ways in which it continued to be an aspect of psychological theorising and experimentation. First, it continued to be used explicitly by theorists although its role in psychological experimentation had altered somewhat. Second, it survived implicitly, as Boring's 'camouflaged introspection' and Costall's 'furtive' introspection, in the methods used by psychologists.

As was described in the previous section, several psychologists argued that it was necessary that introspection was retained in psychology but in an altered form and alongside behavioural observation. Woodworth (1918), as a functionalist and as a theorist who had worked in comparative, physiological psychology, was sympathetic to behaviourist ideals of giving behaviour a larger role in psychological work. He discussed two kinds of introspection – one, the traditional view of the complex process of the analysis of the contents of consciousness into increasingly smaller elements; and the other, a simpler introspection which was used to distinguish, for example, "difference tones and many other... 'subjective' sensations" (p. 33). The former could be dispensed with. The latter, he argued, could not be discarded because of its necessity to the understanding of the relationship of the environment to behaviour. Bentley (1924), similarly, presented a softer version as useful to psychological research "when taken to mean just the observation of a single aspect of experience it loses its sinister and doubtful signification" (p. 44).

There were, also, calls by some behaviourists for the inclusion of introspection, as a means to give direction to the research and to identify what physiological data needed to be analysed and which behavioural observations made. Lashley (1923b) argued that merely ignoring psychological phenomena was not enough. Rather, it was up to

behaviourists to account for these using behaviouristic and physiological explanations. He stated,

Behaviorism has a place for introspection but it must be a vastly different form of introspection from that which now burdens the literature. Its avowed aim must be the discerning of cues to physiological problems and its final appeal to the results of objective methods such as introspection may make the preliminary survey, but it must be followed by the claim and transit of objective measurement. (p. 352)

Although, he argued that psychological phenomena could be explained entirely with recourse to physiology alone, these phenomena could only be identified through self-observation, “The attributes of mind as definable through introspective evidence, are precisely the attributes of the complex physiological organization of the human body,” (p. 352). For Lashley, introspection could only ever be vague and imprecise, “describing the form and pattern of clouds which are capable of analysis into aggregates of water particles by other methods” (p. 338), however, the pragmatic assertion from such a prominent behaviourist that introspection should still be a part of psychological work, lent a great deal of weight to the argument of its advocates. According to Flügel (1933/1964), Lashley's account of introspection heralded a “softening” in the attitude of behaviourists towards the use of introspection in psychology.

Lashley (1923b) argued, also, that introspective analysis was required as a starting point for any behaviouristic psychological investigation because psychology, as a discipline, was so steeped in the language of *experience* and *consciousness*.

To the man trained in the older psychology or philosophy the traditional problems must still seem important, even though he has thrown off most of the metaphysics of the school in which he was trained. Moreover, unless he has first-hand knowledge of a vast range of human activity he must take his facts from the subjective literature where they are arranged and selected with the subjectivist's bias as to their relative importance. Small wonder then that current behaviorism shows the taint of introspection. (Lashley, 1923b, p. 350)

This was also described by Pratt (1922) in his critique of behaviourism, “But not only is the behaviourist forced to make repeated use of introspectionist materials in order to be intelligible; he also finds it necessary to begin his investigations...with introspective facts and to keep them in mind constantly throughout his researches. The

subjective facts both set his problems and guide his methods” (p. 599). For example, the objects of investigation of psychologists continued to be the subjective experiences of human beings – emotion, belief, thought – these were the starting point of investigations, not the muscular reactions or nerve impulses. However, as Heidbreder (1933) discusses, the behaviourist like any other scientist was dependent, not simply on the investigations of the past but also his own immediate experience and as a scientist who was studying the actions and behaviour of human beings was as reliant on his own self-knowledge of the human experience as a means to understand the people he was studying. Although behaviours could be observed, the only way of understanding what that behaviour related to in terms of the particular psychological phenomena was through an understanding of his own mind, body and experience of that phenomena.

Further, introspection continued also to be used by psychologists to describe, if not the elements of the mind, certainly what was being experienced when particular feelings and emotions were elicited. This is outlined in the work of Ruckmick (1936). Although physiological response and behaviour had overtaken subjective analysis in relative importance in psychology, the phenomenological side was still viewed as being a vital component of understanding the mind and effects on human behaviour of the environment. Part of the reason for this was that the behaviourists had found that human behaviour, when studied, was not as predictable as they had assumed. Although behaviourists had tried to do away with the mind, what they found was that there was a variability in behaviour which could not be accounted for. As much as it had been rejected, consciousness often appeared under different guises in behaviourist accounts. DeSilva (1930) describes this situation,

The first difficulty that faces the psychological experimenter is the fact of everyday observation that his subjects do not all respond to the proffered stimulus in the same way, and that individually they do not respond in the same way to the same stimulus at different times. This variable phenomenon of response in the individual observer has been systematically generalized and dealt with in psychology under the term of attention. (p. 71)

In his paper, *The commonsense of introspection*, DeSilva posited the idea that what behaviourists usually call 'attention' is merely a term for what he calls 'conscious behaviour' and describes it as a kind of stream of consciousness and its role in

producing differences in response, “The common sense reason why individual stimuli do not secure uniform responses is that for the observer they blend into a continuous yet ever varying flow of conscious behaviour” (p. 71). This flow of consciousness was, as has been seen, idiosyncratic and variable and, because of its complexity, difficult to analyse and predict. It is no wonder, then, the behaviourists would rather ignore it in the interests of progressing psychological knowledge, as they saw it. However, what they found was a continued need to understand to some extent the internal state of the subject. This often came in the form of ‘verbal report’ as mentioned above by Boring. The use of 'verbal report' by behaviourist psychologists as a means of eliciting data from the subject they studied was controversial because according to their critics this showed that the behaviourists were interested in the minds of their subjects, not merely their behaviour. The study of memory, for example, could not be done without a subject describing what they had remembered. Although the behaviourists protested that these reports were merely verbal behaviour, not reports of mental states or experiences, it was a sign for some that despite the firm anti-introspectionist stance taken by some it was difficult to reject subjective experience entirely and still produce meaningful data.

The second way in which introspection was retained was that it became implicit in the process of research and experimentation. For example, introspection remained a part of psychological theorising related to the continued use of the psychologist’s own mind to observe, analyse and interpret the behaviours that they were interested in. This was highlighted by several theorists at the time. Watson (1913) himself had accepted that consciousness was still to be the main tool of understanding of the psychologist,

If you grant the behaviorist the right to use consciousness in the same way that other natural scientists employ it – that is, without making consciousness a special object of observation – you have granted all that my thesis requires...We might call this the return to a non-reflective and naïve use of consciousness. In this sense consciousness may be said to be the instrument or tool with which all scientists work. Whether or not the tool is properly used at present by psychologists is a problem for philosophy and not for psychology. (p. 175)

Therefore, Watson agreed that psychologists were accessing their own consciousness as a means to develop an understanding of behaviour. What he was arguing for was a

rejection, however, of explicit self-reflection but this also meant that the reflection which must inevitably take place for psychologists as human beings to understand the behaviour of other human beings was to become implicit in their work, given that, as has been described, the starting point of investigations were particular universal human experiences. Wheeler (1923) argued that introspection was necessary to psychology even when it was a behaviouristic psychology,

All of this information is indeed essential to psychology, but when the behaviorist wants to know the significance of these figures what does he do? He interprets; and he interprets just as does the mental tester or the statistician, namely, from his qualitative knowledge of human nature. Introspection is necessary as a method of providing this qualitative knowledge in sufficient detail to be scientifically worthwhile. (p. 106)

To observe, for example, that a subject was displaying a particular emotion, the theorist could not just put aside his own knowledge of emotional experiences in analysing the particular behaviours, neither could they decide what was worthy of study if they did not know what emotions were and how they were experienced. They would need to understand what, for example, 'pleasant' or 'unpleasant' meant in verbal reports in order to make sense of what they were observing and, although they tried all sorts of ways to get round descriptions of conscious experience it was still a part of what they did (Dunlap, 1928).

Therefore, the examination of the psychologist's own subjective experience continued to be an important aspect of psychological theorising, not least in the study of emotion and feeling, where despite the behaviourists' protestations, it survived in various forms both explicit and implicit. The latter was summed up in the critique of behaviourist study of emotion by Sartre (1939/2002),

It is also to experience that the psychologist appeals in order to establish the limits of emotive phenomena and to define them. And, truth to tell, this may well awaken him to the fact that he already has an *idea* of emotion, for after examining the facts, he will draw a line of demarcation between the facts of emotion and those of a quite different order. How could experience supply him with a principle of demarcation if he did not already have one? But the psychologist prefers to hold fast to the belief that the facts fall into groups of themselves under his gaze. (p. 6)

What came out of the disagreements about introspection, therefore, was that not only

should a softer form of introspection be retained but that psychologists, as people who experienced sensations, feelings and emotions, had first-hand knowledge of these which it did not make sense to ignore in the interests of objectivity. To reject introspection entirely as a means to understand human psychological phenomena was also to pretend that their scientific understandings came purely from objective observation and that their own subjective experiences contributed nothing to the research. As Sartre's quote describes above, however, this was a fallacy. A psychologist's first knowledge of emotion comes from his own experience. As Dunlap (1912), Woodworth (1918) and Bentley (1924) argued, attempting to use self-reflection to discover increasingly smaller elements of the mind was a futile task. However, psychologists must still appeal to experience to understand particular psychological phenomena.

This section has described how introspection was retained in altered forms from those used by the structuralists. It has shown that even behaviourists understood that there was a need to have some kind of understanding of subjective experience in order to understand the meanings behind the observation of behaviour. This was especially true of the understanding of emotion. The following section will describe how introspection continued to be used in the study of emotion towards the end of the 1920s. In particular, it will focus on the Wittenberg Symposium on Feelings and Emotions which took place in 1928. The importance of this Symposium is that it was held towards the end of this period of debate - introspection had gone through the period of criticism, structuralism had all but been rejected, and the introspection of emotion was emerging again in its exploratory and analytical form.

6.4.2 Emotion studied through introspection

The International Symposium on Feelings and Emotions held at Wittenberg College, Ohio came at a time which had been preceded by a great deal of questioning about what psychology was and what it should be. After the maelstrom of debate had died down psychologists continued to attempt to understand emotion, although in a

changing epistemological and methodological landscape. This Symposium, the first of four throughout the century, was an opportunity both for reflection on the past and as a collective base on which to generate future directions for the study of emotion in psychology. In describing the content of some of the papers given at the Symposium, this section will outline the ways in which psychologists' own experiences of emotion continued to be used as a means to produce meaningful understandings of emotion in psychology.

The purpose of this first symposium on the subject was to gather together the most prominent theorists working in the field from across the world, with the hope of meeting regularly every five or ten years to be able to show how the area had advanced (Reymart, 1928). Titchener, who was to chair the meeting, died suddenly the year before it was due to take place and was replaced by Cattell, which we can only presume radically altered the theoretical make-up of the conference papers which were presented by twenty US and fifteen European theorists. They included Dunlap, Washburn, McDougall and Woodworth, who were defenders of altered forms of introspection as has been described. However, although there was little radical behaviourist representation - Watson, for example was conspicuous by his absence - the papers included one by Vladimir Bechterev⁴⁶, a compatriot of Ivan Pavlov, who has been described as one of the early behaviourists (Brennan, 1998) and whose *Objective Psychology* had presented a rejection of introspection. Albert Weiss, who could be described as a Watsonian behaviourist also presented a paper entitled, unsurprisingly, *Feeling and emotion as forms of behaviour*.

The symposium papers demonstrate the breadth of psychological theorising about emotion at the time, including papers related to the physiology, abnormal psychology, motor theories, utility theories and psychoanalytic accounts. Joseph Jastrow (1863-1944) presented the various current strands of research in emotion, including those of motivation, evolution and development. There were few psychologists present who adhered strictly to Titchener's structural paradigm but that did not mean that the use of introspection as a method to study emotion was not present in the papers of these, the

⁴⁶ As Bechterev also died in 1927 his paper was presented by another delegate.

most prominent theorists of the time. Given the arguments put forward in defence of the retention of some kind of introspection, as described above, it was still seen as a valuable tool in the repertoire of many psychologists in the understanding of emotion. For emotion, in particular, this was because the subjective experience or bodily feeling was a part of the phenomenon, in a way in which it was not for memory, perception or attention, for example. Therefore, the examination of the psychologist's own experience still held a great deal of salience. As Dunlap (1912) had argued, the self-observation of the mental states might be viewed as impossible, but that of feelings and emotions involved an inherent appraisal of the bodily experience. In order to understand them, therefore, introspection was required as one of the principal means by which they could be studied. The papers described below reflect two of the particular ways, identified in the previous section, in which psychologists' own self-examination was retained. First, that it was used as an initial means, prior to experimentation, to explore what emotion was before a more structured analysis was conducted with participants in the laboratory; second, to identify what the experience of emotion was like and to describe how it might be related to other psychological phenomena. They show that emotion was discussed quite differently between different theorists and that introspective accounts continued to demonstrate the idiosyncrasies of emotion.

The first, and perhaps the most obvious, way in which introspection continued to be used in the study of emotion was in its identification and description, and to present an understanding as a base from which experimental work could develop. If psychology was to admit the study of behaviour to understand emotion in others, there was still the question of how that research would be directed. A paper presented by Frederick Aveling of the University of London, entitled *Emotion, Conation, and Will*, demonstrated the use of introspection as a means to identify what emotion was prior to experimentation. Aveling (1928) regarded introspection as a necessary part of initiating the study of emotion. It was only by examining the experience of it that psychologists would get an initial impression of what it was they were attempting to discover. He argued, "In attempting to determine what a "feeling" or "emotion" is, we must begin with the concrete experience of an affective or an emotional state of consciousness" (p. 49). Aveling, to some extent, unsurprisingly, given the climate of

the time, used the paper in part to defend the continued use of introspection. Any use of introspection in an explicit way would now have to be explained or advocated in some way. From being *the* method of psychology the acceptance of the practice had altered and those who continued to feel it was a necessary aspect of their work would have to use their studies also as an argument for its efficacy.

On the other hand the question for those who had rejected introspection as a method was how they could understand what emotion was without in some way referring to that bodily feeling, given that emotion was equated with that experience in an everyday sense. In contrast to Aveling (1928), Weiss (1928) presented a paper putting forward the behaviourist position; attacking introspective evidence and the mentalistic accounts of emotion it produced, and advocating what he called a bio-social approach. In doing so, he argued that the study of emotion would be more fruitful if the mentalistic understandings were rejected in favour of stimulus-response accounts. In doing so, he was taken to task by Karl Bühler and Morton Prince in the questioning after his paper for using mentalistic terms himself. Both argued that the terms and concepts that Weiss used in his work were drawn from human experience, as much as Weiss was attempting to argue that human experience had nothing to contribute to the understanding of emotion. Bühler made the point that initial explorations in science are done via some kind of informal knowledge of something before the rigorous investigations are carried out to determine the nature of that thing,

for instance...Roentgen found his famous X-rays....He found a certain fact and then by scientific reasoning defined it, and we now know what X-rays are. In the same way we define pleasure and displeasure...Ask a child of three years. It knows exactly that some things have been pleasant and others unpleasant. This is not a good definition, of course; but, we first state the facts and then we have to find a good definition. (p. 191)

Aveling's position, like that of Bühler and Prince, was one of the centrality of the psychologist in the process of the understanding of emotion because, as he had argued in *The Standpoint of Psychology*, rather than psychological phenomena being understood solely in terms of cause and effect, when it comes to understanding these, they must be assumed to exist in relation to the experience and the Self which thinks and feels and makes decisions about them. The mind he argued, could not therefore

be expressed by psychologists in “purely objective and impersonal terms” (Aveling, 1926, p. 170) and that, therefore, “The fact of the occurrence of emotion and its descriptive analysis’, he said,’ are open to introspection and introspection alone” (1928, p. 50). For these theorists there was a belief that without introspection it was impossible to understand the nature of emotion without first examining it as a subjective experience. It was not, they argued, that behaviourists did not do this - it was merely that they claimed not to be using experience as any kind of basis for their work. At the same time, they were presenting accounts which could not be discussed if they had no personal understanding of what the experience of the terms they used meant.

Aveling (1928) did not, however, stop at using introspection alone as a means to understand emotion – the second part of the research process, once some initial work had been done on a working definition of emotion through self-examination, was then to test that definition experimentally. Introspection was useful initially but experimentation was where the work of verifying the initial introspective understandings lay. He was not just interested in the emotional experiences themselves, or of merely describing these as mental states. Accepting James’s theory, he was interested in testing how the aspects of this theory – the cognition of the event and the bodily feeling were connected and how each impacted on the other, “Stated in purely psychological terms, the order of events would seem to be; first, cognition of a significant stimulus; second, conative “set” towards it; and, last, the “stirred-up” characteristic of emotion proper. (p. 52).

We have now to ask what evidence there is of any causal order between the phenomena we have been able to distinguish introspectively, and for what functions each may subserve. This is a matter for experimental investigation, so planned as to vary the introspectible phenomena in a relatively independent way, and to observe the objective results (p. 53)

The reports of introspective experiences were still required during the experiment as it was these, rather than merely the responses of the instruments which were the real test of whether an emotional reaction was underway – without these the understanding of emotion would be impossible. However, the drive in psychological science was to describe emotion in terms of structures and patterns. Therefore, introspection only

took this so far. It meant placing emotion in the lab under standard conditions in order to present it as replicable and predictable.

As stated at the beginning of this section, a second use of introspection is evidenced in the Symposium; that of the grounding of psychological investigation of emotion in the lived experience, rather than as an abstraction from what happened in everyday occurrences. Theories which isolated emotion tended to present it in terms of predictable patterns. In contrast, introspective evidence produced multifarious understandings of emotion. The tendency of behaviourists to denigrate the real experience of psychological phenomena as, what Weiss called, ‘literary’ rather than ‘scientific’ descriptions was opposed by arguments which put experience at the forefront of psychological work. Dunlap (1928), for example, who had been concerned about the artificiality of the structuralist endeavour was equally concerned that behaviourism was producing scientific artefacts of its own. It was doing so because it was ignoring what experience could show. He argued, “When the plain man speaks of fear, rage, or grief, he apparently has reference to some facts – moreover, to facts which are, or can be, experienced (and experience is an occurrence, and an undisputed fact)” (p. 151). Without this experience, however, Dunlap contended, there would be nothing to investigate. “If we actually experience an emotion, the emotion is something demonstrable; and it is something capable of being a stimulus pattern. If it is not, then we are talking in fables, and we should stop discussing emotion in psychology” (p. 152).

Some theorists attempted to use introspection in order to understand emotion in relation to other psychological phenomena as it might occur in the real world. In her paper on emotion and thought, Margaret Washburn (1928) looked at the extent to which emotions interfere with or prevent the thought process. “Emotion”, she concluded, “will aid thought when conditions favour the discharge of this energy into the maintenance of a steady innervation of the trunk muscles, which is the basis of introspectively reported feelings of will, determination, activity, or effort, and which secures the steady influence of the idea of a goal” (p. 111). The reporting of the experience of emotion was a vital component of psychological theorising because there would be no scientific understanding of what it meant for emotion to interfere with thought without it. “Experience”, Washburn stated, “shows that the flow of ideas

is heightened by mild emotion” (p. 110). For these theorists, any definition of emotion, whatever that definition pertained to, should be described as the experience or the feeling, not as the peripheral states of the physical accompaniments or causes or the eliciting stimuli or the expressions. For Aveling an emotion had to be felt. It could be defined as he stated as “the massive and generally wholly unclear experience of coenaesthesia–kinaesthetic sensation” (p. 57). Although this definition lacked precision or explanation, it is a definition which describes emotion as an experience rather than a behaviour.

Like Aveling (1928), Krueger (1928) presented a paper in which emotion is described as an inner experience or feeling. He argued that the understanding of emotion to some extent be based on this, at least in an initial analysis of what that feeling was and what it denoted, “Whatever has been conscientiously observed...can finally be brought under concepts in so far as they have been clearly determined” (p.85). For him the reductionist approach of the behaviourist to stimulus and response was inadequate when it came to understanding the nature of emotion - there was an unpredictability in relation to emotion experience. He argued that, “No constellation of stimuli can ever predict that it will positively initiate feelings at all, to say nothing of releasing this or that definite feeling” (p. 72). However, in attempting to describe the quality of emotions - for example, to distinguish between “deep joy” and “flat joy” - he was, unlike Titchener, content not to analyse it into parts but to understand it as an aspect of a whole and continuous, rather than discrete, experience. Emotion according to both Aveling (1928) and Krueger (1928) was varied, unpredictable and vague. Ignoring introspective evidence which demonstrated that this was the way that emotion was, simply because it was inconvenient for a science to accept that one of their concepts might not be able to be given boundaries and delineations, suggested that what behaviourists described were purely artefacts of their method, rather than studies of emotion.

Some used introspection to develop ideas as to why instances of the same emotion could be different between people or different for different occurrences. Claparède (1928) for example, attempted to explain why there was such a breadth of understandings of emotion by introducing the idea that experience of emotion is not a simple relation of cause and effect but that there is the intervening variable of attitude

which gives the emotion its uniqueness in particular situations. “When you are angry, turn your attention to the kinaesthetic sensations in your clenched fists, to the trembling of your lips, etc. but then you have no longer the consciousness of your anger. Or permit yourself to become absorbed in your anger; but then you no longer experience distinctly the trembling of your lips, your pallor, or the isolated sensations arising from the different parts of your contracted muscular machinery” (p. 129). This observation could have been a criticism of the efficacy of introspection. However, it led Claparède to argue that how people understand their emotions is not related to a simple cause and effect but also related to the attitude of the individual who experiences the emotion. He stated, “This peripheral conception which regards the emotion as the consciousness of an attitude of the organism is, besides, the only one which can take account of the fact that the emotion is immediately, implicitly “understood” by him who experiences it” (p. 129). Claparède’s introspectively produced account of emotion is an interesting one because it describes why there might be discrepancies between an individual’s introspective accounts. He went on to explain how this would account for the “infinite variety of affective phenomena, feelings, and emotions” (p. 133) and to describe how theories of emotion, the James-Lange, in particular, were too simple to account for the range of experiences that people would describe as emotional, “We can now understand why the range of affective phenomena is indeed richer than a theory would foresee which, as that of McDougall, would relate each emotion to a definite instinct...as there are more affective *nuances* than definite instincts, one is obliged to admit that feelings may...have...attitudes intermediate to two or more instincts” (p. 133). Introspection was therefore being used to explain some of the characteristics of emotion in a way in which external observation could not.

Howard (1928), also, in presenting a paper on a functional theory of emotion, introspectively described the experience of emotion as being nuanced and messy rather than linear and clear as some psychologists attempted to describe in their theories. He argued against the position taken up by some functional and structural theorists that separated the emotions from other elements of the mind but instead argued that,

Introspectively, as well as objectively, emotion is a state of disruption. All the sensational, imaginal, and affective elements of the experience are exploded out of their natural patterns, are confused and mixed and meaningless...Introspection upon genuine emotional states will, I am

assured...show that none of the sensational or affective elements are in the focus of experience, but on the contrary, experience is without focus or margin, a confused and scattered state of consciousness. (p. 146)

What is interesting from these papers is the way in which each describes emotion in some way, not as a clear cut and precise and predictable phenomenon, but rather that it is none of those things. This understanding contrasts with Watson's behaviourist theory of emotion as, "an hereditary 'pattern-reaction', going on to explain that, "By 'pattern-reaction' we mean that the separate details of response appear with some constancy, with some regularity and in approximately the same sequential order each time the eliciting stimulus is presented" (Watson, 1919, p. 195). These papers represented a view of emotion as one which might ultimately defy attempts to be defined as predictable and patterned if viewed from an experiential viewpoint. They also highlighted the artificiality of the endeavour to isolate emotion and to develop theories about how it functioned away from real experiences of the bodies and minds in which it took place. Another point to note is that those psychologists which referred to introspection tended to define emotion primarily in terms of its experiential aspects and continue to view anything else, while being informative, as simply accompaniments or signs that an emotion was occurring but not the emotion itself, thus limiting the meaning of the term to the phenomenological.

However, the requirement to present emotion as structured and predictable was never very far away from these introspective depictions and could be used as a means to reject these as unscientific. Both these and the other papers in the symposium show the way in which tide was flowing and the drive towards findings ways to present emotion in a more clear cut and structured way, through behavioural experiments, physiological experiments and the development of statistical analysis. While these introspective theorists were resisting the attempts to construct a science which left out experience, they were all involved in the construction of a science which attempted to produce universal, predictable and structured ideas of emotion.

6.5 Conclusion

This chapter has shown how during the early twentieth century introspection was a contested method. It has described the criticisms of it and how it was defended. The criticisms represented the drive in psychological science to produce knowledge which presented universal and predictable patterns of response. The defence of introspection was for the retention of the method as a means to understand the experience of psychological phenomena without which physiological and behavioural data would be meaningless. The period saw the demise of systematic experimental introspection but the retention of a 'softer' form of the method, in recognition that emotion was first and foremost a subjective experience. Therefore, the method was retained by some psychologists, albeit in an altered form, and continued to be used in both a formal and informal sense to direct their experimental study and to understand emotion as a human experience. The understandings of emotion which were presented through the use of introspection, as described above, are characterised by being complex, variable and nuanced and not following the laws of patterns of prediction. However, although they were advocated by these theorists as being a necessary aspect of the scientific process they tended to be relegated to work outside the lab.

CHAPTER 7

CONCLUSION

7.1 Introduction

The preceding chapters have presented an account of the various ways in which introspection and other methods were used by psychologists to study emotion during the period 1850-1930. They have described particular issues for the understanding of emotion as a subjective experience that arose in relation to the drive to study emotion scientifically. A range of issues have been explored, including debates over the efficacy of introspection, the changing nature of psychological knowledge and, within that context, the varying conceptualisations of emotion. This chapter will conclude the thesis by presenting a brief overview of the content of these chapters and in the other sections will present answers to the research questions. It will then examine how these answers relate to the current situation before summarising the contribution that the thesis makes to the issue of the problem of definition.

Chapter Three described the use of introspection to study emotion in the mid to late nineteenth century by psychologists who were not experimentalists but, nevertheless, saw the use of introspection as a method of sorts to examine the mind and its contents and to describe what they found there. Emotion was often understood simply to be a subjective experience, but this view proved difficult for psychologists to maintain when attempting to find scientific consensus, as a result of the differences in perception of emotion that were revealed when introspection was used. Chapter Four covered the same period but looked at the embracing of physiological and evolutionary approaches in psychology. It showed that these were seen as necessary by many psychologists who felt that self-observation alone was not able to produce scientifically useful understandings of emotion. These ways of framing emotion seemed, however, to undermine the idea that it should be conceptualised as a subjective experience. Chapter Five outlined the controlling and constraining of the method of introspection by the structuralists and, as the resultant controlling and constraining of descriptions

of the psychologists' experiences of emotion. It described the difficulties that psychologists faced in taking emotion into the lab and that, despite tight controls on the method, consensus on a scientific understanding of emotion could not be achieved. Chapter Six depicted the arguments for and against the use of introspection in the early part of the twentieth century. It showed that introspection survived to be used to study emotion, mainly because it was felt by many psychologists that self-observation was vital to the meaningful understanding of emotion. It demonstrated that its use was largely for pre-experimental exploration and as a means to formulate questions and to analyse experimental evidence. It, further, described the differences between theorists' disorganised perceptions of emotion which were produced when using introspection and the structured accounts they attempted to formulate in the lab.

Overall, the late nineteenth to early twentieth centuries were characterised by the development of the concept of emotion in relation to particular scientific criteria and by the uneasy relationship psychologists had with the method of introspection and the sorts of understandings about emotion it produced. These often did not seem to fit with a discipline striving to be accepted as a science. While many believed in introspection and the need for psychologists to understand emotion through self-examination, other assumptions as to how emotion should be conceptualised in science were in conflict with the understanding of emotion as a subjective experience. These points will be developed below where I return to the research questions presented in Chapter One.

7.2 Discussion of the research questions

The research questions to be investigated in this thesis as stated were: What was the effect of the drive to conduct psychological research scientifically on the way in which subjective experiences of emotion were viewed? How did this drive contribute to the proliferation of understandings of emotion?

As described above, Chapters Three to Six have shown that during this period the concept of emotion developed in a climate in which scientific psychology was seeking to establish its credentials as a science. Decisions were being made about what were

acceptable and not acceptable scientific understandings of emotion. For the theorists of this period, the study of emotions, as described by Dixon (2003), was viewed as being “value-neutral” because they were being studied within a scientific, rather than a theological framework of knowledge. However, as Solomon (2002) points out scientific research into emotion has never been value free. Certain kinds of knowledge and certain methods are preferred over others, and this has shaped the way in which the concept of emotion developed in psychology. In answering these research questions it is, therefore, important to summarise the sorts of underlying assumptions on which psychological science was founded during this period, as revealed in the previous chapters, in order to understand how the concept of emotion was, and is currently, shaped.

From the early days of psychology there was a pervasive assumption that psychologists should present a picture of emotion that was characterized as predictable, structured, universal and measureable. It is these assumptions that lay at the heart of the way in which psychological science developed, as evidenced in the thesis by the criticisms aimed at introspection and the diversity of ways in which emotion was viewed. The drive for a concept which embodied these characteristics is discussed particularly in Chapter Four but really underpins the debates about emotion and the best way to observe it throughout the chapters. Universality, for example, was the assumption prevalent in the work of the associationist psychologists as they attempted to isolate the elements of the mind and look for the connections between them. It meant that psychologists were striving to present something about the commonalities, rather than the idiosyncrasies of emotion. It underlay Spencer’s criticisms of Bain’s classification of the emotions as being only applicable to a “civilized man”. While rarely explicitly stated, it supported the debates during this period as to, for example, the lack of consensus of introspective findings, the need for physiological understandings, the drive for replicability of results, and the arguments of the behaviourists against introspection. What Danziger (2007) calls, “the holy grail of universality”, was the founding principle of psychological knowledge. A scientific psychology required theorists to establish what they could find to agree on and in this climate subjective experiences presented a challenge. In answering the research questions, I will focus on three particular ways in which the chapters demonstrate that the assumption of

psychologists that they search for only universal characteristics, clashed with introspective characterisations of emotion: first, through the attempts to isolate emotion as a universal element of the human mind; second, in the generation of predictive laws and theories; third, in relation to the requirement for measurement and replicability of data. This section will also go on to summarise the effect that the search for a concept which embodied these assumptions had on the number of understandings of the concept.

In attempting to define emotion scientifically psychologists first had to isolate it as a scientific element and delineate it as one of the common elements of the mind. Bain's 'systematic exposition of the human mind', in *The Senses and the Intellect* and *The Emotions and the Will* was a significant step in the development of scientific psychological understandings of emotion. The presentation of emotion as a main element of the mind was based on several assumptions. First, that it was possible to isolate emotion from the whole of experience and, second, that it had distinct characteristics by which it could be defined. Danziger (1993, p. 10) states, referring to present day psychology, that in order to distinguish emotion as a scientific object, there has to be an "agreed category of events labelled... 'emotional' which can be distinguished from other events and about whose basic features there is a large measure of pre-understanding". Prototypical experiences would need to be drawn on for the development of understanding and non-prototypical disregarded in the attempt to produce emotion as a scientific object. In doing so there was an assumption that boundaries could be placed on the idea of emotion so that it could become a hard and fast scientific concept.

However, this conceptualisation of emotion was often not what theorists saw when they viewed emotion within themselves. As described in the work of some of the early theorists and in the Wittenberg papers, rather than being one kind of psychological experience, it appeared fluid and would alter depending on the circumstances under which different emotions were elicited. Indeed even James (1890a) was not convinced that elements could be so easily extracted from the "stream of consciousness". Introspective evidence challenged the idea of the simple extraction and examination of one element from a complex experience. James warned of the consequences for

psychological knowledge if psychologists started their introspections with the assumption that particular elements are basic to the human mind or consciousness,

Consciousness, from our natal day, is of a teeming multiplicity of objects and relations, and what we call simple sensations are results of discriminative attention, pushed often to a very high degree. It is astonishing what havoc is wrought in psychology by admitting at the outset apparently innocent suppositions that nevertheless contain a flaw. The bad consequences develop themselves later on and are irremediable, being woven through the whole texture of the work. The notion that sensations, being the simplest things, are the first things to take up in psychology is one of these suppositions. The only thing which psychology has a right to postulate at the outset is the fact of thinking itself, and that must first be taken up and analyzed. (p.185)

Psychologists, James argued, should not start off their introspections with elements in mind because these assumed particular divisions. Consciousness and experience were much messier and entangled than these delineations allowed for. This sense of the untidiness of the mind and the inability to isolate elements using introspection if no prior groupings were provided is highlighted at the end of Chapter Three where theorists describe the difficulty of conceptualising and classifying emotion. Emotion as an experience, resisted isolation, but focusing on what were viewed as the accompaniments was just as confusing. Physiological measures did not give clarity. This was described by Ladd, as shown in Chapter Four. Facial expressions and behaviours sometimes accompanied certain affective states but often did not. The use of these as indirect measures or indicators, when a particular emotion was occurring, was inconclusive. It was difficult to find evidence for emotion or particular emotions, as isolated, coherent scientific concepts no matter how it was studied. Further, while connections were made between emotion and other elements of the mind in psychology, it was as if these had been carefully put back together, having been artificially delineated in the first place, in order that a scientific relationship between them be developed. This is described both in Spencer's work and in the Wittenberg papers.

Further, as has been demonstrated, psychologists did not start to isolate and examine emotion from a value-free position but, with particular purposes, or frameworks of knowledge, in mind. Thus, the isolation of emotion was done within the various scientific contexts defined by particular ontological and epistemological

commitments, whether that was associationism, structuralism, evolution or behaviourism. Each of these frameworks imputed emotion with different characteristics. Each extracted a different view of the isolated concept of emotion, depending on the approach that they took. Something as ephemeral, as intangible or indistinct as emotion could be easily altered to fit with particular views. Spencer's development of evolutionary associationism, for example, located the concept into that particular framework of systematisation. It defined emotion as part of the evolutionary and gradual development of the mind as a way of imposing some structure on the mind and on its elements. The structuralists' methods of controlling what took place in the laboratory was also a means by which to isolate and encapsulate emotion according to a particular view of scientific psychology. The observers were to focus on one particular aspect of their experience as they responded to the stimuli that were presented. They were to focus also on certain features – pleasure or displeasure, for example – but not others. These specific feelings were to be isolated from the other experiences or thoughts they might be having. As described in Chapter Five, however, structuralists experienced profound difficulties in isolating emotion for laboratory work. The experience and its accompaniments seemed to lose something of the quality of emotionality. The fuzzy boundaries of human experience could not easily be captured as concrete objects necessary for scientific 'discovery'.

As much as psychologists tried to isolate emotion it was sometimes recognised that it had to be grounded within human experience. As Alfred Carver (1919, p. 52), the English psychologist, stated, "No person has ever yet satisfactorily defined emotion, and any attempt to isolate it from its setting, so to speak, is foredoomed to failure; for emotion is only one part or aspect of a more comprehensive internal adjustment". There was something about the wholeness of experience that was lost when theorists tried to capture it or remove emotion from its natural setting. The removal of the context in which it was usually played out or understood or experienced caused emotion to lose something of its essence – of what makes it emotional. From a phenomenological point of view, Sartre (1939/2002, p. 11) was to state, "For the psychologist emotion signifies nothing, because he studies it as a fact; that is, by separating it from everything else. It will then be non-significant from the start; but if every human fact is in truth significant, this emotion of the psychologists is of its nature

dead, non-psychic, in-human”. The removal of emotion from its setting as a means to show that it could be used to present a universal picture of the human mind, caused its significance to be altered and it began to take on different meanings which related more to the scientific context in which it was studied, than the everyday context in which it is was experienced.

The second way in which attempts were made to produce scientific accounts of emotion was through the development of laws and theories. The most important characteristic of a theory was that it be able to predict. The chapters of the thesis describe various ways in which psychologists attempted to show that emotions could be shown to be universally predictable. Although introspection was the preferred method, finding a consistent theory through the description of emotion that came from that method, proved problematic, as described in the section on James’s theory. Instead of exploring the idea that emotion may be unpredictable, theorists instead looked to other frameworks of understanding for their theories. Bain’s Law of the diffusive action of emotion as described in Chapter Three predominantly focused on the physiology of the body in describing the emotional response. Darwin’s laws of expression of emotions were grounded in assumptions of the adaptive quality of emotion; Wundt’s Tridimensional Theory, while focused on the experience of emotion, attempted to shape that experience in terms of particular predictable characteristics. Watson’s theory, of course, rejected the experience of emotion altogether in favour of a physiological stimulus-response model. Underlying the development of each of these theories of emotion was the assumption that a universal and correct theory of emotion could be discovered. Such a theory could be predictive for all instances of emotion in different individuals, for different emotions, across place and time.

As described in the last section of Chapter Four, theorists understood very quickly that the study of experience through untrained introspection was not going to achieve the evidence they required to present emotion in this way. As shown by the debate over James’s theory, in the early period of the discipline, they often drew on introspective descriptions of the experience of emotion while trying to demonstrate that these accounts were universal and their theories universally applicable. There were, therefore, disagreements over the correctness of each theory. Prior to the period in

which psychology began to use experimental methods, much of the debate as to the efficacy of theories was grounded in the logic of the particular position taken up by a theorist. After the development of psychology as an experimental discipline, it was expected that the theories be backed up by evidence produced by the experimental methods. However, because theories were grounded in specific frameworks of understanding about the subject matter of psychology and about what sorts of understandings psychology should produce theories of emotion often pertained to particular viewpoints as to what the subject matter of psychology should be. Therefore, even where experimental evidence was produced, there were as many barriers to debate as to the efficacy of a particular theory as there were when theorists argued about the findings of introspective evidence.

The presentation of theories of emotion as produced within different frameworks of knowledge meant that there was a movement away from understandings as related to the experiences of individual psychologists. This analysis ties in with Danziger's (1993, p. 16) statement that there was around 1879 a change in the way in which psychology operated. Before this period, it was acceptable to present theories grounded in everyday language and experience. After that time, what was valued was that theories be grounded within particular "empirical domains". Even where the subjective experience was still viewed as necessary for the understanding of emotion, individual perceptions of emotion became supported by the particular frameworks within which they were located. The development of empirical domains meant that there was a range of accepted structures in place to maintain theories. As has been described, physiology was a particular empirical domain within which a scientific theory of emotion could be supported. This was important for the support for James's theory in particular, as it was tied to the work of the physiologist, Lange. Indeed James (1894) refers to Lange's work in the defence of his theory in *The Physical Basis of Emotion*. Without this connection to an established and respected scientific discipline, its arguments on the basis of introspective evidence alone would have lacked the necessary scientific credentials and would, perhaps, have been taken less seriously. The subjective experience of emotion could not provide the predictive certainty that psychological science required.

Finally, in order to present scientific accounts, emotion had to be observed, and data about it gathered. This was to be done in such a way that its assumed universal characteristics be revealed. For observations to demonstrate universality this meant that findings must be replicable. Replicability demonstrated a truthfulness about the findings which non-replicability did not. It was the means by which psychology could show that the data that it produced was scientifically valuable. For those who believed that capturing the experience of emotion was necessary but also believed in the need for replicability, the means to control self-observation was needed. Bain, for example, did so by applying the structure of the Natural History Method in developing a classification and, of course, the associationists' purpose in describing the development of ideas guided their introspections to some extent.

The assumption that psychology should produce replicable results caused problems for the study of emotion introspectively, however. As described in Chapter Three, it was often claimed that introspection, even when guided, did not produce consensual understandings of emotion. These were often different even within the same psychologist at different times. The development of experimental psychology at the end of the nineteenth century set out to deal with this difficulty of lack of consensus and replicability of psychological evidence. The main purpose of experimentation was to control both the input and the output. This is shown most clearly in Chapter Five which describes how Titchener demonstrated the means by which introspection could be subject to scientific controls in order to produce the kind of data that is required for replication to take place. When the method and descriptions were controlled sufficiently observers seemed to produce similar results as is described by Nafe (1924). However, such controls were easily criticised on the grounds of providing synthetic data.

Even those who continued to advocate introspection as a pre-experimental route to exploring the nature of emotion, still believed that reducing emotion to a laboratory experiment was the most valuable way of presenting a scientifically acceptable understanding. This is shown in Chapter Six in the section on the papers from the Wittenberg Symposium where several theorists describe the untidiness of emotion when observed introspectively yet look to translate that untidiness into a simplified and controlled version produced in the lab. While the experience of emotion seemed

to show a nuanced, idiosyncratic and messy picture, theorists expected that the reductive process of the experiment would be sufficient to capture enough of the phenomena from which to progress understanding. Danziger (1993, p. 9), however, maintains the difficulty with this translation. In relation to quantitative analysis, he states “Experiences do not naturally arrange themselves in the form of statistical terms; they have to be arranged accordingly”. In taking emotion into the laboratory, psychologists were “arranging” emotion to suit the way in which they assumed scientific observations should be conducted. If the right experiment could be found, then data from the emotions could be shown to be replicable.

Despite the determination of psychologists to find out some universal truths about emotion, at the beginning of the twentieth century, as today, a consensual definition of emotion, or even anything near to it, had not been produced in psychology and accounts were diverging sharply. Undeniably, the search for an understanding which embodied the particular characteristics psychologists were looking for had played a part in multiplying scientific conceptualisations. They had failed to take account of the evidence, both from introspective and physiological psychology that emotion could be a complicated, messy and often disorganised experience. They attempted to isolate the emotions from their context, both as part of the mind and as part of human existence and had believed that the generation of individual accounts if controlled enough, could say something about emotions at all points of time and place. In casting around to find the correct theory or classification or experiment, theorists had ignored much of the nature of the experience of emotion as described through introspection. Rather than getting closer to emotion as it might exist in people’s experiences, or at least the phenomenon people understood to be encapsulated by the term *emotion*, they were adding layers of meaning to the concept even as they studied it and moving it further away from the individual experience they sought to describe. As they did so, the concept took on different meanings which, while having meaning in particular scientific contexts, were inadequate in encapsulating the experience of emotion.

These concepts, as abstractions, thus lost the ability to reflect the human experience of emotion through the drive to produce scientific psychological knowledge. This flaw in the scientific process did not go unmentioned in the late nineteenth century. Hurlbert and Knapp (2006), for example, describe a paper given by the pioneering

German-US psychologist Munsterberg (1863-1916) in which he portrays what happens to subjective experiences when attempts are made to capture them scientifically,

Reality means to us here the immediate experience which we live through. This immediate truth of life may be transformed and remoulded in theories and sciences, and these remodelings of reality may be highly valuable for special purposes of life; we may even reach finally a point of reconstruction from which the subjective experience appears as an illusion and the supplementation stands as the only truth. Yet the importance of such constructions must not make us forget that we have then left reality behind us. Our doubting and remoulding itself belongs to the reality for which its products can never be substituted. (Münsterberg, 1899, p. 12)

Rather than simplifying the way in which emotion was conceptualised, the result of the ‘doubting and remoulding’ was that it became increasingly complex and it was difficult to find common ground between the different understandings of it that were advanced. The different conceptualisations of emotion as an isolated, predictable, structured, scientific object left psychologists with a number of definitions but none that encapsulated it adequately. This is captured in the following quote from Sartre (1939/2002, p. 5), “what is to be gained from the principles and methods of the psychologists? First of all, our knowledge of emotion will be something additional to and *outside* all our other knowledge about psychic being.” Theorists lost sight of that which they were studying as they tried to extract emotion from its natural environment, take it apart, reduce it to physiological process or facial expressions and then put these back together with experience in some systematic and structured way, to shape it in the way they wanted it to be, rather than the way their self-observation often told them it was. The following contrast presented by Solomon (p. 134), describes nicely just how far away scientific and everyday depictions of emotion become from each other through the scientific process,

Whereas psychologists talk rather clumsily about “anger” and “rage,” for instance, we readily distinguish between resentment, contempt, pique, displeasure, irritation, moral and righteous indignation, wrath, hatred, being in a bad mood, sulking, bitterness, rancor, acrimony, hatred, outrage, fury, raving, fretting, frustration, plus all those metaphors, fuming, foaming, simmering, stewing, boiling over, bristling, bursting, being hot-headed, becoming incensed, “crabby,” blowing one’s top, and flying off the handle.

This section has shown that assumptions of science in the late nineteenth and early twentieth century drove the understanding of emotion away from that of a subjective experience. Psychologists attempted to present a concept of emotion which was isolated, structured, predictable and replicable. The subjective descriptions of emotion, in contrast, had shown it to be often characterised as rooted in experiences and attitudes, chaotic, fluid and idiosyncratic. These attributes were often ignored by theorists as the drive for scientific progress took precedence. Thus the understandings of emotion they produced lacked something of the meaning, essence or quality of emotion as experienced and, perhaps ironically, caused a proliferation of understandings of emotion to be produced as psychologists attempted to produce an understanding of emotion which was scientifically useful. The following section will discuss what these findings have to tell us about the current problem with the definition of emotion in psychology.

7.3 Revisiting the current problem

This section will return to the problems set out in Chapter One as to the current proliferation of definitions of emotion and lack of consensus. First, it will discuss the way in which the assumptions under which scientific psychology were formed continue to be a feature of current psychological epistemology; second it will examine the extent to which the subjective experiences of psychologists as human beings continue to be a part of psychological theorising; and third, it will describe the effect on the concept of emotion of the increasing diversity of the frameworks within which it is studied. It will then, briefly, return to the suggestions made in the current literature as outlined in Chapter One as to the reasons for and solutions to the problem of definition in the light of the findings.

There is no doubt that modern psychology still embodies the traditions of its nineteenth century forebears. Psychology more than any other science has seemed unable to discard its history and move into new ways of conducting scientific work (Smith, Harré

& van Langenhove, 1995). This issue is also described by Bevan (1991), who cites Daniel Robinson's argument that American psychology continues to follow the lead of the nineteenth century psychologists in terms of how problems are formulated. Current psychology, therefore, still adheres to conventions set out in the early days of the discipline – most notably the issue of the need to understand psychological phenomena in terms of their universality. Indeed, this assumption lies at the heart of the problem dealt with in this thesis: that it is seen as not only desirable but necessary for psychologists to find consensus on a *universal* definition of emotion. While, as Danziger (2007) describes, there has – since around the 1960s and 1970s - been more criticism of this universality hypothesis and arguments for cross cultural and discursive understandings which allow qualitative differences to be highlighted, there is still a deeply held assumption that the purpose of scientific psychology is to emphasise what is similar between people, rather than what is different. Current psychologists, largely continue to adhere to this conviction and criticisms of the methodological and ontological foundations on which psychology has been constructed go unheeded and as a result the picture today is not dissimilar from that of the early days of psychological science.

While psychologists explicitly used introspection as a method, there was, to some extent at least, a focus on each theorist's individual description rather than abstractions from a sample of participants. There was, and still is, however, a presumption that progress in understanding emotion is to be found by looking for general rather than particular cases. However, as has been described, an accepted general understanding of emotion from which to present exceptions to the rule has not been forthcoming. Nevertheless, there is still in current psychology, as there was in the nineteenth century, the belief that with enough time and with the right epistemological framework, that a correct universal definition of emotion will be discovered.

As shown in the previous section scientific conceptualisations of emotion are often driven by the need to define it as measurable and replicable. Scientific procedures and statistical techniques have been developed to aggregate and average psychological characteristics. These are relied on in psychology as a means to present universal data: for example, in the use of measures of central tendency; in the rejection of 'outliers' and in the rejection of data that does not produce a significant result. Studies are

selected and designed, not only to study what can be measured but to find what might be typical and to leave the untypical unexamined. The hypotheses which are being tested in these and on which the advancement of universally applicable theories relies, are accepted or rejected solely on the basis of the discovery of typicality. It is in the context of the psychological laboratory where the defining of emotion now takes place, but the legacy of the ideas of the early nineteenth century psychologists is still present. While there are no longer systematic expositions of the mind, there are still assumptions that in the laboratory, emotion can be isolated, operationalized and examined out of the context in which it typically arises. There is still an assumption that it can be described in terms of a set of pre-selected characteristics and that it can be formed into a scientific object in relation to the discovery of these characteristics. There is also still an assumption that with the right method of observation an accurate picture of emotion will be discovered.

As time goes on, however, the continued proliferation of definitions of emotion and lack of consensus in psychology, would seem to suggest that the methods which are designed to produce replicable data on which universal definitions and theories may be based, rather create abstract understandings of the concept. There are many examples of how this happens – here I describe three in particular. First, while the data they present may be replicable in particular methodological contexts, they do not make a secure basis for producing good, coherent and universal theories of emotion because their significance is related so deeply with the context in which they are created. Second, the obsession with averages means that data which does not show statistical significance is rejected, thus sets of findings which show a picture other than universality are not published. Theorists, therefore, search for the experiments that will give them significant findings and to an extent this means that these are self-fulfilling prophecies. Third, it must also be remembered that the approaches and methods of scientific psychology, as shown by the period covered in this thesis, are subject to change over time. While the underlying assumptions as to the nature of valuable psychological knowledge have remained fairly stable over time, the concept of emotion has been described in relation to developments in frameworks of knowledge, not only those that have been discussed - physiological, evolutionary and behavioural - but more recently cognitive and neuroscientific. These have developed

often as a result of changes in the technology which has been employed in the observation of emotion: the photograph, the kymograph, the galvanometer, and more recently the computer and the fMRI scanner. The use of these new technologies and the domains of knowledge that they operate within, as Gergen (1996) describes, has resulted in changes in the metaphors through which emotion is defined. The terms of definition have been heavily influenced in psychology by the methods adopted.

The concept of emotion in psychology is so bound up with the methods and forms of analysis that it is no wonder that it does not reflect the idea of emotion as an individual experience. This position is perhaps understandable given the impossibility of studying every person and producing purely idiosyncratic accounts of emotion. However, this approach often results in the assumption that the abstractions produced by experimentation are representative accounts and fail to account for those instances which show anything outwith a 'normal' range of behaviour. It oversimplifies the phenomena being studied. Indeed, the primitiveness of current methods in psychology is often surprising. This was described by Bevan (1991, p. 476),

Both the model of the science-making process and its affiliated metaphysics remains simplistic, if not simple-minded. Although much has been made of the alleged cognitive revolution, we continue to be stubbornly reductionistic and mechanistic in the way that physics was mechanistic before the advent of relativity theory.

The study of the experiences of participants are therefore often shaped to fit with this reduced and simplified cause and effect understanding of emotion and the differences and nuances between people and their experiences are lost.

The second point to be made in this section is that not only are participants' experiences shaped to fit experiments, but the experiences of psychologists are pushed aside by the methodological assumptions that exist to generate scientific accounts, above all, by the assumption of objectivity. Although Chapter Six ends with the continued use of introspection there is no doubt that since then explicit reference to the experiences of psychologists in relation to their work has fallen out of favour while introspection has never gone away (Costall, 2006). The subjective involvement of psychologists in the construction of accounts of emotion is overlooked or seen as irrelevant in the process of producing a scientific account. As Slife and Williams

(1995) describe, however, these are profoundly influential on the kinds of data that are generated. They claim that, “scientists decide what to study, how to understand what is being studied, how to measure it, what to control for, and what not to control. The very definitions and framing of a research question are shot through with traditions, history, expectations, values, and other subjective factors” (p. 193). Ignoring the input of psychologists’ experiences of emotion to the accounts that are produced means that inaccurate accounts of how the findings were arrived at are often presented. Bevan (1991, p. 476) identifies this as being an issue,

When one examines in a first-hand way how scientists actually think and behave, one quickly understands that formal accounts of the process and what actually takes place are very poorly matched. Real-life scientific problem solving does not really happen according to the canonical script. It involves impressive amounts of tacit knowledge that never surface in formal reports and is a far richer, more complex, and more intuitive process than any textbook account ever suggests.

Gergen (1973, p. 311) has argued similarly that, “as socialized human beings, we [psychologists] harbor numerous values about the nature of social relations. It is the rare social psychologist whose values do not influence the subject of his research, his methods of observation, or the terms of description”. The illusion of objectivity that exists in psychology means that accounts of emotion are produced which, although written from the point of view of an objective observer in the language of the concepts and methods of psychology have still been influenced by the subjective choices made by individual psychologists. When psychologists were more explicitly reflective on their own experiences of emotion, as well as their own philosophical positions, there was a far greater understanding of why they might advocate particular views of emotion, the subjectivity of psychologists was accepted as part of the process of understanding and the context within which the theory or definition was constructed was more apparent. Further, as Klein (1942) was to argue, in discussing the disappearance of the kind of introspective psychology exhibited by the likes of James, Ladd and Stout, these theorists, while not producing experimental data, nevertheless provided empirical evidence, gleaned from their own experiences. Their evidence, while being neither scientifically verifiable nor replicable, provided psychology with some of the most valuable insights into the human mind. This contrasts with the

current production of definitions of emotion as detached scientific objects which appear to have nothing whatsoever to do with the experiences of the people that produce them.

Thirdly, not only are scientific accounts of emotion abstractions but, because psychology is a diverse discipline, these continue to be constructed in relation to particular frameworks of knowledge. This thesis has described several strands of thought that were prevalent by the nineteenth century, and the number has continued to increase over the twentieth and twenty first centuries. As time goes on the number of domains within which emotion is studied in psychology have grown as a means to find a way to discover the truth about emotion. Henriques (2004, p. 1207) describes what happens when a fragmented discipline attempts to theorise,

Currently psychology exists as an uneasy compromise between unification and fragmentation. On the one hand the existence of numerous societal institutions suggests that psychology is a singular entity at some level...a more detail inquiry reveals a remarkable degree of confusion, fragmentation, and chaos at the theoretical level.

The current problem of the lack of consensus on the definition of emotion in psychology, therefore, must be understood not simply as a result of the inability of psychologists to ‘discover’ what emotion is, but as a result of the diversification of a discipline which, historically, has struggled to decide what its subject matter should be. As time has gone on this issue has only got worse as more and more ontological positions have been developed through which to understand the phenomenon. This analysis concurs with Staats (1983 as cited in Henriques, 2011) who describes psychology as a discipline which is unable to reconcile the concepts that it produces. He argues that psychology has no means by which to integrate theories but seems to rather encourage the proliferation of different “scientific products” without looking at how these can be consolidated. This has resulted in a, “a buzzing confusing mass so huge and ominous that even if there were organizing ideas, they would not be found because everyone is intent on inventing a new concept or term to measure rather than building on existing knowledge” (p. 28).

As was highlighted in the previous section and other chapters of the thesis, the search for universality has not, therefore, caused psychologists to narrow down the range of

ontological or theoretical options open to them. It seems, rather, that the pursuance of universal knowledge in psychology has resulted in the proliferation of ways of understanding emotion. The production of abstracted theories of emotion within 'empirical domains' may cause, for those working within these areas, an illusion of their universality because these are supported by the epistemological and methodological constraints of the domain in which they are constructed. However, when taken out of the domain they lose their predictive power. Further, as described in the previous section, the development of these domains, is the cause of difficulties in the comparison of theories and it is no wonder, therefore, that consensus is hard to achieve. As Danziger says,

Most of the time, psychological theories do not travel well. Take them out of their appropriate empirical environment and they seem like fish out of water. This is because the rules used in the construction of empirical domains tend to be based on the same fundamental assumptions as the theories devised for the explanation of these domains. If one abstracts theories from their proper empirical context and tries to apply them in an empirical context constructed on fundamentally different, perhaps opposite, principles, one is either engaging in a meaningless or self-contradictory exercise. (1993, p. 6)

Interestingly, therefore, the perceptions of emotion as produced within different domains display the same characteristics of idiosyncrasy as those described in the previous chapters, particularly by the early introspectionists. They are pertinent only to the individual domains in which they exist and while they may be expressed in terms theorists of other domains might understand, there is still a peculiarity to them which makes sense only within the structures of each domain. This could be seen to parallel the experience of emotion itself which if abstracted and isolated from the human domain in which it is usually experienced loses something of its significance. In both instances, emotion is defined and understood within particular contexts, whether in the individual mind and body or within specific frameworks of knowledge. As the introspectionists found when they tried to debate their understandings of emotion there was no adjudicator and no agreed benchmark on which their different perceptions of emotion could be judged. The construction of a plethora of psychological definitions of emotion throughout psychology's history has echoed the nature of the subjective experience of emotion in individuals: that while we may understand it to be a universal

phenomenon, the ways in which people experience, discuss or appraise their emotions may be highly individual and context specific.

To close this section I return to the suggestions made in Chapter One as to the reasons for and solutions to the problem. The argument was made in Chapter One that there is no consensual definition of emotion because it has many aspects. In the light of a diverse psychology it would seem, rather that it is the discipline that has many aspects and that it has imposed its features on the concept. This process has been shown in the way in which understandings of emotion in the nineteenth century moved away from the conceptualisation of it as a mental state and experience to embrace its accompaniments as part of the emotion through the use of physiological and behavioural methods. Mulligan and Scherer (2012), pick up in their argument that it is the adherence of psychologists to their own traditions that perpetuates the problem of consensual definition. However, this analysis does not go far enough because they assume that this issue can be overcome by further abstracting a complex definition from drawing together aspects from different traditions. They offer a possible ‘working definition’ of emotion which they hope will transcend these differences by gathering up what they see as the most plausible characteristics of emotion in order to present an essentialist or prototypical view. Nevertheless, they fail to take into account that these characteristics have been produced in accordance with particular assumptions about psychological knowledge and its production, and that they exist in relation to these assumptions. It often feels as if theorists are attempting to go back to the drawing board, whilst failing to recognise that they are unable to do so because the various conceptualisations they draw on are built on the historical foundations of particular assumptions around the efficacy of a scientific psychological concept of emotion. Scarantino and Griffiths’s (2012) argument about the separation of folk and scientific psychology would seem, also, in the light of the findings, to be more about some kind of imagined purity of science as untainted by human beings, their history and their experiences. It does not take into account that the production of psychology is a human activity and that folk and scientific understandings, if indeed they can be separated out in that sense, are bound up in a reflexive process with each other as we as human beings endeavour to construct an understanding of our emotions. Further, if scientific theories move too far away from the way in which we may commonly

understand ourselves, they start to lose their meaning. Shealy (2005) has observed, for example, that,

the scientific theories we create, studies we construct, analyses we conduct, and findings we report are too often too far removed from whatever human phenomena they are designed to explain, predict, or control. . . [W]hen we subsequently “feed” such theories and findings to our students and trainees, they often leave the table feeling empty and dissatisfied, because the humanistic “food group” has been scientifically extruded from the main course. (p. 83)

7.4 Contributions of the thesis

In this section I will highlight a couple of particular instances where I believe this thesis has added to the literature on the history of emotion before moving on to discuss the main contributions to the literature on the problem of the definition of emotion in psychology that this thesis makes. Each of these latter points are in some way related to the issue of contextualisation. First, the thesis indicates that when emotion is defined outside the context of human experience it often lacks human significance. The second concerns the acknowledgement that the context in which emotion is observed and defined has profound effects on the way in which the concept is formulated. Third, is the assertion that it has been demonstrated in these chapters that there is a need to contextualise present definitions of emotion in terms of psychology’s past.

First, the thesis could be said to present an original approach to the issue of the definition of emotion because it looks at the conceptualisation of emotion in relation to the use of introspection in the work of the early psychologists. This period of introspection appears to have been particularly neglected in historical work in comparison to the later method espoused by Titchener and has not been examined as a method for the study of emotion. Perhaps that is why, although much attention has been devoted to James’s theory in the historical literature, little has been made about it being the product of introspective analysis. In describing his advocacy of the method of introspection and appeals to experience as much as to physiological evidence in the

defence of his theory, this thesis attempts to address this neglect, and in so doing produces an alternative reading of the origin of this prominent theory..

More generally the thesis has, first, set the study of emotion and the methods used to study it in the context of psychology as a human activity. It has described how it is within this context that the current issue of lack of consensus as to a definition of emotion must be understood, and has shown that while introspection was explicitly used as a method in psychology there was an acknowledgement of the involvement of the experiences of the psychologist in the understandings of emotion that were produced. It has also demonstrated that psychologists are not simply objective observers but, as human beings, bring something of themselves to the work that they do. It is important, therefore, that psychologists are able to acknowledge their own experiences as being part of the way in which they understand emotion. In doing so the concepts that are produced could be set in context and, therefore, be presented in a more meaningful way. This is something that has been taken on board by qualitative psychologists who understand how psychological research is shaped by the individuals who produce it and would benefit quantitative psychology also.

Secondly, this thesis demonstrates the need for the acknowledgement of the effects on the concept of emotion of the context and conventions under which it is studied. It has shown that it cannot be taken for granted that emotion is a complex concept but that it, rather, alters in relation to the frameworks through which it is understood. It shows that there is a need to contextualise the definitions of emotion that are constructed in psychology and to understand that no one correct definition can be found because the concept of emotion is subject to the approaches and methods and these, as history has shown, tend to shift over time. There may have to be an acceptance that the definitions of emotion that are produced are irreconcilable. The findings back up Koch's argument that it is perhaps futile to seek consensus, certainly among the different branches of psychology,

The 19th-century belief that psychology can be an integral discipline, which led to its institutionalization as an independent science, has been disconfirmed on every day of the 112 years since its presumptive founding. When the details of that history are attended to, the patent tendency has been toward theoretical and substantial fractionation (and increasing insularity among the "specialties"), not toward integration. Moreover, there are many principled

considerations that underline the futility of seeking theoretical, conceptual or even paradigmatic unification. (Koch, 1993, p. 902)

There is, therefore, the suggestion in the thesis, in contrast to those who believe that a consensual definition will be found, that a universal and stable depiction of emotion will not be discovered simply through experimentation and academic debate because it is rather that the concept of emotion, alters in relation to these. What has been shown, is that within the paradigms of psychological science emotion is not under a process of continuous refinement but of a process of continuous diversification and alteration. It differentiates as it is taken up by different theorists at different points in history, in relation to different paradigms, as it is discussed in different terms and as it is studied through different technologies. The various meanings that are applied to it change between methodological and epistemological landscapes. It is a moving target but not one that will be chased down. Therefore, the meanings that it is given through being observed by psychologists should be contextualised and instead of chasing consensus, there should be an acceptance and contextualisation and understanding of difference and the process of change.

This thesis has also reiterated the need for, and usefulness of, historical analysis in contextualising not only the conceptualisation of emotion but other issues faced in psychology today. As has been demonstrated one of the problems that psychologists face in relation to the definition of emotion is that they work with the legacy that they have inherited from the traditions and assumptions rooted in the work of nineteenth century psychologists. Most psychologists spend little time in examining how these affect the understandings that they produce and has resulted in the continuation and repetition of some simplistic notions as to what sorts of outcomes psychological science can achieve, such as a ‘true’ definition of emotion. The extent to which this legacy is an issue revealed by Harré (cited in Smith, Harré and van Langenhove, 1995, p. 10): “That a field of academic specialism should exist so shot through with conceptual confusions, unexamined assumptions from antique philosophical positions long since demolished and propounding theories of such gross implausibility seemed to be quite shocking”. Again some reflection is required: reflection on the epistemological and methodological legacies and where these have led psychology in the various ways in which it has conceptualised emotion. Psychologists also work

with the inheritance of concepts of emotion which have been shaped in particular historical contexts. It is, therefore, by contextualising the current situation through the use of historical enquiry that emotion can be understood both as a psychological concept and human experience. Further, the concepts of emotion that have developed within scientific psychology are part of the history of human behaviour (Smith, 2007). At one level, the production of them demonstrates how we have endeavoured to make sense of our lives and our place in the world. They also reflect historical and cultural values that are subject to change over time and must be understood in relation to the contexts which produced them. As this thesis has shown, it is through examining the production of the psychological concept of emotion that we will come to understand its true significance and meaning.

7.5 Conclusion

This thesis started out by looking for a reason for the problem of a lack of consensus on a definition of emotion. It has described how the concept of emotion was altered through scientific observation from being understood as a subjective experience to one which embraced many different factors and has shown that the drive for a universal depiction of emotion has, paradoxically, driven the concept in many different directions. The relentless search for the holy grail of a consensual definition at the neglect of the individual experiences of emotion has perhaps sent psychologists off on the wrong track, or certainly a fruitless track. It would seem that this obsession, in which the experimental participant's experience is universalised and abstracted, and the psychologist's own subjective experience in the process viewed as irrelevant, produces knowledge which fails to capture an understanding of emotion which makes sense when assessed in the cold light of everyday experience. It is worth repeating Arnold's (1960) statement presented in Chapter One, that, "When the connection between any system and common experience snaps, that system (and not common sense) is doomed. At best, it will maintain itself in a forgotten eddy in the stream of scientific endeavour without contributing to scientific advance" (p. 6). It is to individuals, both psychologists and the human beings that they study, that theories of

emotion must make sense. If these stray too far from the experience of emotion and become too mechanistic or reductive they lose their ability to encapsulate the phenomena that they are attempting to capture.

It is vital, therefore, that psychologists understand the need to contextualise their definitions, both in terms of their own experience, in terms of the research context and in terms of history in order to understand the significance of the theories and definitions of emotion that they produce. In doing so more meaningful understandings of emotion can emerge. As Solomon (2002) argues,

Let us remind ourselves what fascinated most of us about the emotions in the first place: the convolutions of love, the dialectic of anger, resentment and revenge, the agonies of humiliation, embarrassment and shame, the long-term passions of Othello or an Iago and not the tenth of a second startle reaction or the spontaneity of disgust. (p. 133)

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